DOCUMENT RESUME

ED 443 208 EC 307 900

AUTHOR Pruslow, John T.
TITLE A Comparison of the Costs and Educational Outcomes of Three Models of Service Delivery for Special Needs Students.
SPONS AGENCY National Center for Education Statistics (ED), Washington, DC.
PUB DATE 2000-04-26
NOTE 48p.; Paper presented at the Annual Meeting of the American Educational Research Association, (New Orleans, LA, April 24-28, 2000). Research supported in part by a 1999 Scholar in Policy Analysis Award.
PUB TYPE Reports - Evaluative (142) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Cost Effectiveness; *Delivery Systems; *Disabilities; Elementary Secondary Education; *Inclusive Schools; Models; Outcomes of Education; Regular and Special Education Relationship; Special Needs Students; Statistical Analysis; Tables (Data); *Teaching Models
IDENTIFIERS *Kings Park Central School District NY; *Utility Analysis

ABSTRACT

This paper reports on a cost analysis of Kings Park (New York) Central School District's expenditures for special education services and relates that analysis to a comparison of proposed models of service delivery. The first section of the paper reviews the current status of New York State's initiative to document educational outcomes for special needs students and summarizes three recommended models of service delivery derived from research and the professional literature: (1) the full inclusion model; (2) the conservationist model; and (3) the conciliatory model. The paper's second section explains the resource cost model used to identify and calculate the Kings Park special education costs for providing instructional personnel, transportation, and facility resources during 1997-98. It also describes the utility scales developed to project the study's mathematics and language arts outcomes. The paper's third section presents the final cost analysis and utility scale results for the study's three models. The study found the lowest or most favorable utility ratio was for the conciliatory model, followed by the full inclusion model. The least favorable utility ratio was for the conservationist model. (Contains 37 references and 12 tables.) (DB)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 443 208

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

✓ This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

# A Comparison of the Costs and Educational Outcomes of Three Models of Service Delivery for Special Needs Students

by John T. Pruslow

Paper presented at "Creating Knowledge in the 21st Century: Insights from Multiple Perspectives," the 2000 Annual Meeting of the American Educational Research Association, April 26, 2000, New Orleans, LA.

The research presented herein was supported in part by a 1999 Scholar in Policy Analysis Award funded by the U. S. Department of Education – National Center for Education Statistics and awarded through the American Educational Research Association Fiscal Issues, Policy, and Education Finance - Special Interest Group.

BEST COPY AVAILABLE



EC 307900

**A Comparison of the Costs and Educational Outcomes of Three Models of Service Delivery for Special Needs Students**

**by John T. Pruslow**

In recent years, both the media and the professional literature have been extremely critical of special education policy and practice. Much of the criticism has focused on the growing number of students served (Lipsky & Gartner, 1996; Stainback, Stainback, & Forest, 1989), the burgeoning cost of services (Allis, 1996; Dillon, 1994), and the lack of identifiable educational outcomes for special needs students (Lipsky & Gartner, 1991; Lipsky & Gartner, 1996; Ysseldyke, Thurlow, & Shriner, 1994). In addition, some researchers (Parrish, 1996; Rothstein & Miles, 1995) claim that current special education practices are consuming increasingly greater percentages of available education dollars which may be resulting in the inadequate funding of many regular education programs.

An extensive body of professional literature and research published between the middle 80s and late 90s referred to as the Regular Education Initiative or Inclusion Debate, addressed the controversial question of how best to serve the nation's special needs students. A review of that professional literature and research identified three major proposals for special education service delivery: full inclusion or integration of all students, continuation of the status quo, and a compromise position. However, despite the considerable discussion of proposed solutions, scant attention was paid to any consideration of the costs of the proposed solutions. And in fact, cost analysis continues to be a conspicuously absent component of education program planning and evaluation (Levin, 1983).

**Statement of Purpose**

The purpose of this study was to do a detailed and comprehensive cost analysis of an average Long Island school district's (New York State Education Department, 1997) expenditures for special education services and add that cost analysis to a consideration of proposed models of service delivery purported to produce positive educational outcomes. Henry Levin's design for a utility-analysis (1983) was replicated to compare the costs and projected educational outcomes of three models of service delivery for special needs students: the Full Inclusion Model, the Conservationist Model, and the Conciliatory Model (Pruslow, 1999). The study's costs for resources were derived from Suffolk County, Long Island's Kings Park Central School District's instructional personnel, facility, and transportation resources as provided for its 1997-98 special education population. The study's outcomes were the district's projected results for its 1997-98 special education population on New York State's new language arts and mathematics assessments scheduled for implementation during the 1998-99 school year.

In the first section of this paper, I briefly discuss available data on the cost of special education, review the current status of New York State's initiative to document educational outcomes for special needs students, and summarize three models of service delivery derived from research and professional literature to improve educational outcomes for special needs students. In the second section, I briefly discuss the Resource Cost Model approach utilized to identify the Kings Park Central School District's 1997-98 special education population and the district's costs for providing the instructional personnel, transportation, and facility resources necessary to meet their needs during the 1997-98 school year. The utility scales developed to project the study's mathematics and language arts outcomes are then briefly described. The third section is used to present the final cost analysis and utility scale results for the study's three

models. The final section of the paper is used to present my discussion of the study which includes its policy implications and my recommendations for future study.

This study was guided by the following research questions:

1. Do inclusive models of service delivery for special needs students cost more per student than traditional models?
2. In what ways do models of special education service delivery impact a school district's expenditures for regular education students?
3. How do models of service delivery for special needs students impact the costs of a school district's facility resources?
4. In what ways do models of service delivery for special needs students affect the costs of a school district's transportation resources?
5. How do representatives of a local school district rate the utility of the Full Inclusion Model, the Conservationist Model, and the Conciliatory Model for assisting their special needs students to perform on grade level as defined by New York State's new learning standards in English language arts and mathematics?
6. How do the cost-utility analysis ratios of the three models compare with one another?

## What Do Available Data Show

### The Cost of Special Education

In reality, relatively little is known about the cost of special education services, especially at the state and local level (Chambers, Parrish, & Lieberman, 1997; U.S. Department of Education, 1997) or how special education costs would be affected by more inclusive models of service delivery. Existing studies of special education's costs are either over a decade old (Moore, Strang, Schwartz, & Braddock, 1988) and may not reflect current conditions (O'Reilly,

1995) or based upon data which were unavailable in New York and twenty-five other states (Parrish, O'Reilly, Duenas, & Wolman, 1997). In addition the appreciable variation included in the national averages provided by these studies may be of questionable value for local school district practitioners.

**Educational Outcomes for Special Needs Students**

Possibly in response to the lack of identifiable educational outcomes for special needs students, the provisions of the reauthorized Individuals with Disabilities Education Act of 1997, now require all states to include students with disabilities in statewide assessments and to make results available to the public. In New York State, the Department of Education is currently working towards the implementation of new learning standards as well as a new state assessment system for all students, including those in special education. The first of these new assessments was scheduled for the 1998-99 school year.

**Suggested Models of Service Delivery**

Closely linked to IDEA's mandate for the inclusion of special needs students in state-wide assessments is its preference for more inclusive models of service delivery which avoid the separate placement and instruction of special needs students. Based on a review of the research and professional literature addressing the Regular Education Initiative and Inclusion Debate, I have developed a rationale for the development, implementation, and staffing of three models of service delivery for special needs students: The Full Inclusion Model, the Conservationist Model, and the Conciliatory Model (Pruslow, 1999).

The costs for implementing each of the models were directly related to the instructional personnel staffing pattern and class size deemed by the author as compatible with the philosophical underpinnings of each model. Of course, in actual practice, decisions about

staffing and class size for each of the models might vary based on curriculum concerns or the needs of the individual special education student as evaluated by a school district's Committee on Special Education. However, in an effort to remain objective and to ensure a meaningful cost comparison of all three models, each model's staffing pattern was implemented consistently for each period of instruction and class sizes (except for resource rooms and self-contained special education classrooms) were kept comparable.

The Full Inclusion Model, based largely on arguments by Giangreco and Putnam, (1991); Lipsky and Gartner, (1996); Roach, (1995); Snell, (1991); Stainback, Stainback, and Forest, (1989); and Villa & Thousand, (1995), was characterized by its heterogeneous groupings and rich staffing patterns reflective of its commitment to collaborative practices to effectively accommodate the needs of all students in integrated settings. In the comparisons and cost analysis calculations completed, the basic unit of instruction for the Full Inclusion Model was called the Adaptive Instruction Team (AIT). While all teaching situations may not require or desire the presence or involvement of all team members, a team consisting of a regular educator or discipline specialist, a special educator, and a teacher assistant was assigned to work with a specific group of students which includes some with special needs. In the district's grades K-4 nondepartmentalized settings, an AIT might spend most of the day with a particular group of children, while in the district's grades 5-12 departmentalized settings a team might be together for only specific academic periods.

The Conservationist Model was representative of arguments for the perpetuation of traditional special education practice (Fuchs & Fuchs, 1991; Fuchs, Fuchs, & Fernstrom, 1993; Kauffman & Hallahan, 1995) and the application of the "continuum of services" to placement as generally applied in the school district studied. Federal and state regulations require that a full

continuum of services ranging from a regular education classroom to a residential facility be available as placement options, but that a CSE's decision be based on the needs of each individually evaluated special needs student.

In the school district studied, indistrict special education placements included the regular education classroom, the resource room, and the self-contained classroom. In regular education classrooms, the special education teacher's role was that of a consultant to the regular education teacher with consultation facilitated through the use of mutual planning time. The district's special education resource rooms were staffed by a single special education teacher who worked with five students or less in one period intervals. Special education self-contained classrooms were limited to twelve students or less and staffed by a special education teacher and a teacher assistant.

The Conciliatory Model, on the other hand, was presented as a modified inclusion or compromise position reflective of the various participants in the Debate who acknowledge dissatisfaction with current practice, but for various reasons question the viability of full inclusion for all special needs students (Algozzine, 1993; Audette & Algozzine, 1997; Deno, Foegen, Robinson, & Espin, 1996). Concerns included the extensive preparation and training necessary for teachers (Pugach, 1995; Schumm & Vaughn, 1995) and various questions related to legal and fiscal accountability (Yell. 1995). The staffing configuration selected to reflect the middle of the road position of the Conciliatory Model was one of compromise. The compromise was an inclusion team consisting of a regular education teacher and a special education teacher rather than the three-person adaptive instruction team of the Full Inclusion Model. The two-person team was viewed as both a response to a concern for fiscal responsibility as well as a

decision to model a team on the configuration most often utilized in early inclusion efforts and modeled in the literature (Villa & Thousand, 1995).

Another compromise consistent with the middle of the road position of the Conciliatory Model was the provision of resource rooms for the support of integrated special education students who would be in self-contained classrooms with the Conservationist Model's traditional approach. In addition, the provision of resource rooms was a compromise to acknowledge the preference of many special educators and others for a perpetuation of the continuum of services and also to provide a consistent fiscal expenditure that reflects the reluctance of some to completely abandon traditional special education practice.

**Methodology for Identifying and Calculating Costs**

The methodology employed in this study to identify and calculate the special education costs in an average Suffolk County, Long Island school district is known as the Resource Cost Model (RCM) approach. The process is rooted in Henry Levin's (1983) "ingredients approach" to cost analysis which requires the identification and valuation of a program's physical ingredients, rather than traditional accounting and budgetary information, to accurately assess a program's cost (Chambers, 1998). Central to the model is the concept of "opportunity cost" (Levin,1983) which acknowledges that an educational resource usually has more than one application, and by electing to utilize it for one particular program or intervention, we simultaneously sacrifice our option to utilize it for another. The process is particularly valuable for assisting education policy makers and administrators to utilize the most cost-effective applications of limited educational resources. Chambers suggests that the RCM is unique in that it provides researchers with the opportunity to develop cost analysis studies in which the unit of analysis is either the special

education student (Chambers, 1997) or the varied services provided to meet the needs of a particular group of special education students (Chambers & Wolman, 1998).

**The Kings Park Central School District's 1997-98 Special Education Population**

The focus of data collection for the identification and cost analysis of the Kings Park Central School District's special education resources was the district's 1997-98 special education population and the services provided for them. District records identified 3,571 K through Grade 12 students receiving educational services during the 1997-98 school year and 428 students or 12 percent of the total student population receiving some form of special education. Kings Park's Director of Special Education identified 32 students or 7 percent of the district's special education population receiving special education services outside of the district's schools at district expense.

Table 1 below presents Kings Park's 1997-98 special education population by indistrict school: Early Childhood Center (Kindergarten Program), Park View Elementary School (Grade 1-4 Program), Fort Salonga Elementary School (Grade 1-4 Program), William T. Rogers Middle School (Grade 5-8 Program), and Kings Park Senior High School (Grade 9-12 Program). It also identifies the number of special education students serviced in programs outside of the district. In addition, it gives the percentage of special education students serviced in each placement.

Table 2 below identifies Kings Park's 1997-98 indistrict special education population by categorical label and grade level. The categorical labels utilized include the following: learning disabled (LD), speech impaired (SI), emotionally handicapped (EH), other health impaired (OHI), mentally handicapped (MH), orthopedically impaired (OI), hard of hearing (HOH), traumatic brain injury (TBI), and autistic (AUT). Kings Park's out of district special education students could not be accurately identified by categorical label or grade level.

Table 1

| Kings Park Central School District K – 12 Student Population 1997-98 | | | | | | | |
|---|---|---|---|---|---|---|---|
| | ECC | PV | FS | WTRMS | KPHS | Out of Dist SPED | District Total |
| Student Population | 273 | 564 | 634 | 1132 | 936 | 32 | 3571 |
| SPED Students | 21 | 63 | 36 | 143 | 133 | 32 | 428 |
| %SPED | 7.7% | 11.2% | 5.7% | 12.6% | 14.2% | 100% | 12.0% |

Table 2

| Indistrict Special Education Students by Grade and Categorical Label | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | LD | SI | EH | OHI | MH | OI | HOH | TBI | AUT | Total |
| Grade K | 3 | 10 | 3 | 2 | 3 | 0 | 0 | 0 | 0 | 21 |
| Grade1 | 7 | 4 | 6 | 2 | 3 | 0 | 1 | 0 | 0 | 23 |
| Grade 2 | 16 | 3 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 24 |
| Grade 3 | 17 | 2 | 1 | 3 | 6 | 0 | 0 | 0 | 0 | 29 |
| Grade 4 | 21 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 23 |
| Grade 5 | 29 | 0 | 3 | 5 | 4 | 0 | 0 | 0 | 1 | 42 |
| Grade 6 | 25 | 1 | 0 | 5 | 2 | 0 | 0 | 0 | 0 | 33 |
| Grade 7 | 18 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 22 |
| Grade 8 | 42 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 46 |
| Grade 9 | 27 | 0 | 3 | 2 | 0 | 2 | 1 | 1 | 0 | 36 |
| Grade 10 | 28 | 0 | 2 | 4 | 0 | 0 | 2 | 0 | 0 | 36 |
| Grade 11 | 31 | 0 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 38 |
| Grade 12 | 19 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 23 |
| Totals | 283 | 20 | 32 | 33 | 20 | 2 | 4 | 1 | 1 | 396 |
| Percent | 71% | 5% | 8% | 8% | 5% | 1% | 1% | 0% | 0% | 100% |

**Instructional and Related Services Personnel**

This study's Resource Cost Model approach to identify and value a school district's costs for instructional and related services personnel was guided by recent publications of the Center for Special Education Finance (Chambers, 1998; Chambers & Wolman, 1998; Parrish, 1998) and consultation with Jay Chambers (personal communication, January 4, September 8; October 10, 1999). However, this study hopefully provides a meaningful contrast to the work of Chambers and others by its detailed focus on an individual school district's entire special education population rather than the comprehensive sampling of the special education services of an entire state.

In fact, even within an individual school district, the patterns of service delivery provided for elementary and secondary level students differ considerably and require separate identification and cost analysis procedures (Chambers, 1997). In the district's grade K-4 programs, the principal unit of service delivery was the self-contained classroom. Instructional options included a regular education program, a regular education program supplemented with a daily resource room period, and a self-contained special education classroom. Related services were provided to both regular education and special education students as deemed appropriate by district administrators. Thus with the exception of related services, students assigned to the same teacher or teachers received the same quantity or value of services.

However, in the district's 5-8 middle school and 9-12 high school, instruction was departmentalized and few students' schedules were exactly alike. In addition, middle school students attended a two-day rotation of eight periods per day averaging 41 minutes each and a daily 17-minute advisory period, while high school students attended a four-day rotation of four 80-minute instructional blocks and a 40-minute lunch block each day. The identification and cost

analysis of instructional services provided for special education students in the district's middle school and high school were facilitated with copies of the individualized schedules of all special education students in grades 5-12. Interviews with all staff involved in either student assessment or related services were requested to account for all students receiving psycho-educational assessments, related services, or both.

**Cost Analysis Calculations**

Spreadsheets were formulated so that entering a teacher's base salary and the number of minutes of instructional and preparation time devoted to a class or activity, resulted in a calculation of the class or activity's daily and annual cost to the school district. Each base salary entered was increased by 28 percent, the value of the district's average benefit package, and divided by the 180 days in the district's school year to identify the cost of a teacher's day. The sum of instructional and preparation time was extracted from the teacher's 6 hour and forty minute day as a percentage which was subsequently extracted from the teacher's daily salary to identify the daily cost of the program, service, or activity. The daily cost of any service or program multiplied by the number of times it was scheduled during the school year identified the annual cost of the service or activity. In a similar fashion, the cost of a program for a single student or a group of any size was available by first identifying a program's total enrollment and then extracting a student's or group's percentage of total enrollment to also calculate the identical percentage of total cost. In summary, using the process described above, a value or cost was calculated for all regular education, special education, and related services provided for special education and regular education students in the district's K-12 programs.

## The Identification and Valuation of Facility Resources Provided for Both Regular Education and Special Education Services

### Data Collection

Data used to place values on the district's five instructional facilities included each building's reconstruction costs and floor plans for each of the buildings which provided for the identification and area in square feet of all building, classrooms, and other program and instructional spaces. In addition, teacher and special education student schedules identified the specific classrooms and other areas in which special education services were provided.

### The Annualization of District Buildings and Instructional Space

The cost analysis process employed was modeled on the work of Levin (1983; personal communication, January 20, 1999). Conceptually, reconstruction costs were divided by the useful life expectancy for each building to obtain each building's value for one year and added to the calculated worth of the forgone investment of each building's still undepreciated value at the available interest rate. However, Levin's annualization factor table (1983, p. 70) was utilized to address the reality of varying values of depreciation and interest over the useful life of most buildings. An annual value for each building was calculated by multiplying its reconstruction cost by a selected annualization factor indicative of each building's useful life expectancy and an interest rate of 7.5 percent. Placing an annual value on any classroom or instructional space was facilitated by calculating its percentage of the appropriate building's total area in square feet and calculating the value of that percentage of the building's total annual value.

## The Identification and Valuation of Transportation Resources Provided for Special Education Students

### Data Collection

Data collected for the identification and valuation of the district's transportation resources included reconstruction or replacement costs for the department's garage facility and its trailer respectively as well as the purchase price and useful life span of all district buses and vans. Also included were the salaries of all transportation department staff including drivers, mechanics, secretary, and supervisor and all transportation system maintenance expenditures including custodial services, security, and insurance but also tires, fuels, lubricants, automotive fluids, and other miscellaneous supplies and materials.

### The Cost Analysis of Special Education Transportation Resources

The effort to calculate the cost of the district's transportation of its special needs students focused on the identification of the bus routes designated for the transportation of its eligible K-4 special education students. During the 1997-98 school year, the district transportation of any student in grades 5-12 required that they live at least one mile from their designated school, and no special transportation arrangements were made for special education students in grades 5-12. Never the less, the process required an effort to place meaningful and appropriate values on all of the Transportation Department's available resources as outlined by Levin (1983). The district's costs for the transportation of special education students to programs outside of the district were identified by the transportation supervisor from his computerized records of monthly expenditures to private transportation contractors.

**Educational Outcomes**

This study's educational outcomes were identified as the results of the utility scales (Levin , 1983) completed by the study's respondents. District representatives rated each model based on their own assessment of its value or utility in assisting district special education students to achieve four grade appropriate language arts goals and four grade appropriate mathematics goals as defined by New York State's new learning standards for all students. They were then asked to rate each model a second time based on the probability that they, their professional colleagues, and their community supporters would be successful in utilizing the model to assist their1997-98 special education population to meet the new standards.

The study's mathematics goals were as follows:

Students will master computational skills as a foundation to:

- Think logically and creatively (TL and C)
- Apply reasoning skills to issues and problems (AR Skills)
- Perform basic mathematical calculations (P B M Cal)
- Determine what information is needed for particular purposes and be able to acquire, organize, and use that information for those purposes (A O U I)

The study's language goals were as follows:

Students will read, write, listen, and speak for:

- Information and understanding (I and U)
- Literary response and expression LR and E)
- Critical analysis and evaluation (CA and E)
- Social Interaction (SI)

**Scoring the Scales**

A respondent's score for each goal equaled the product of its utility rating (a score from "0" to "10") and probability rating (a score from "0" to "10"). A respondent's total math score for each model was calculated as the average of the four utility and probability products pertaining to each math model. Thus for each respondent, products representing each of the four math goals were averaged for a Full Inclusion Model total math score, a Conservationist Model total math score, and a Conciliatory Model total math score. The process was similarly replicated to obtain each respondent's total language arts score for the Full Inclusion Model, the Conservationist Model, and the Conciliatory Model. Subsequently, for each respondent, a final combined score was calculated for the Full Inclusion Model, the Conservationist Model, and the Conciliatory Model by totaling his or her total math and total language arts score for each model. Finally, all respondents' combined scores for each model were averaged to identify the study's final utility scale rating for each model.

**Cost Analysis and Utility Scale Results**

The completed cost analysis of the school district's resources utilized to service the needs of its 1997-98 special education population found the district's special education expenditures totaling approximately $5,344,092, the cost for this study's Conservationist Model. Instructional personnel costs amounted to $4,168,392 or 78 percent of the total, while the value of facility space required amounted to $858,369 or 16 percent of the total, and transportation costs amounted to $324,440 or 6 percent of the total. However, the study failed to account for the full extent of the district's provision of assessments and related services provided for special education students and consequently have been omitted from the cost analysis considerations of

all three models. Please see Appendix A for a presentation of the district's costs for both assessments and related services.

The primary focus of this section is the district's costs for instruction and their impact on each model of service delivery. While the annual value of the district's facilities totaled over $6 million, the value of facility instructional space was found to impact the costs for all models and all students with relative consistency. The district's costs for special education transportation were largely explained by district contracts for the transportation of its 32 special education students serviced in out-of-district placements. However, the annual values of the district's building and transportation facilities are presented in the final calculations and addressed in this paper's discussion section.

Worksheet Table 3 displays the costs of the identified instructional personnel ingredients provided for the district's kindergarten program. In addition the worksheet table shows the impact of the special programs (art, music, physical education, library, computers) provided and class size on the cost of a kindergarten section. It also presents this study's Conservationist Model configurations for regular and special education kindergarten instruction.

Once spreadsheet calculations served to identify the cost of any class, service, or activity for the day or year, placing a cost on any model of service delivery became a matter of piecing together the appropriate or desired ingredients included in each model. Worksheet Table 4 shows a comparison of the costs for half-day kindergarten instruction projected for the implementation of the Full Inclusion Model, the Conservationist Model, and the Conciliatory Model in the school district.

## Table 3

| District Nondepartmentalized Ingredients/Options/Costs | | | | For 6 hour 40 minute day and 180 day school year | | | |
|---|---|---|---|---|---|---|---|
| At $71,782, Average District K-4 Teacher's Annual Salary w Benefits, Represents 16 years of experience and 80% with MA | | | | At $75,977, Average District K-4 SPED Teacher's Annual Salary w Benefits, Represents 16 years of experience and 100% with MA | | | |
| **Program** | **Section Cost** | **Class Size** | **Cost/Stud** | **Program** | **Section Cost** | **Class Size** | **Cost/Stud** |
| **Half Day Kindergarten** | $30,507.16 | 18 | $1,694.84 | **Half Day Kindergarten** | $32,290.20 | 12 | $2,690.85 |
| One classroom teacher | | 19 | $1,605.64 | One classroom teacher | | 11 | $2,935.47 |
| | | 20 | $1,525.36 | | | 10 | $3,229.02 |
| | | 21 | $1,452.72 | | | 9 | $3,587.80 |
| | | 22 | $1,386.69 | | | 8 | $4,036.28 |
| | | 23 | $1,326.40 | | | 7 | $4,612.89 |
| | | | | | | 6 | $5,381.70 |
| **Half Day Kindergarten** | $39,165.75 | 18 | $2,175.88 | **Half Day Kindergarten** | $40,948.79 | 12 | $3,412.40 |
| Adding full-time TA | | 19 | $2,061.36 | adding full-time TA | | 11 | $3,722.62 |
| For $8,658.59 | | 20 | $1,958.29 | for $8,658.59 | | 10 | $4,094.88 |
| | | 21 | $1,865.04 | | | 9 | $4,549.87 |
| | | 22 | $1,780.26 | | | 8 | $5,118.60 |
| | | 23 | $1,702.86 | | | 7 | $5,849.83 |
| | | | | | | 6 | $6,824.80 |
| **Half Day Kindergarten** | $41,677.83 | 18 | $2,315.44 | **Half Day Kindergarten** | $43,460.87 | 12 | $3,621.74 |
| With full-time TA | | 19 | $2,193.57 | with full-time TA | | 11 | $3,950.99 |
| adding 2-30 min reading per/wk | | 20 | $2,083.89 | adding 2-30 min reading per/wk | | 10 | $4,346.09 |
| with specialist for $2, 512.08 | | 21 | $1,984.66 | with specialist for $2, 512.08 | | 9 | $4,828.99 |
| | | 22 | $1,894.45 | | | 8 | $5,432.61 |
| | | 23 | $1,812.08 | | | 7 | $6,208.70 |
| | | | | | | 6 | $7,243.48 |
| ***Half Day Kindergarten** | $45,123.03 | 18 | $2,506.84 | ***Half Day Kindergarten** | $46,906.07 | 12 | $3,908.84 |
| With full-time TA | | 19 | $2,374.90 | with full-time TA | | 11 | $4,264.19 |
| with 2-30 min reading per/wk | | 20 | $2,256.15 | with 2-30 min reading per/wk | | 10 | $4,690.61 |
| adding 2-40 min/wk specials: | | 21 | $2,148.72 | adding 2-40 min/wk specials: | | 9 | $5,211.79 |
| Mu at $1722.60 + PE at $1722.60 | | 22 | $2,051.05 | Mu at $1722.60 + PE at $1722.60 | | 8 | $5,863.26 |
| * This configuration used for Conservationist Mod. | | 23 | $1,961.87 | *This configuration used for Conservationist Mod | | 7 | $6,700.87 |
| | | | | | | 6 | $7,817.68 |

## Table 4

| Early Childhood Center Model Cost Comparisons | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Model** | **Grade** | **Tot Served** | **Inc SPED** | **Sections** | **Ave Size** | **Unit** | **Cost** | **Cost/Stu** | **SPED Cost** | **Per Student** |
| **Inclusion** | | | | | | | | | | |
| Regular Ed | K | 160 | 0 | 8 | 20 | $45,123.03 | $360,984.24 | $2,256.15 | $0.00 | |
| A.I.Team | K | 113 | 21 | 6 | 18.8 | $77,413.23 | $464,479.38 | $4,110.44 | $86,319.18 | |
| **Total** | **Grade K** | **273** | **21** | **14** | | | **$825,463.62** | | **$86,319.18** | **$4,110.44** |
| **Conservationist** | | | | | | | | | | |
| Regular Ed | K | 252 | 0 | 12 | 21 | $45,123.03 | $541,476.36 | $2,148.72 | $0.00 | |
| Self-Contained | K | 21 | 21 | 3 | 7 | $46,906.07 | $140,718.21 | $6,700.87 | $140,718.21 | |
| Resource Room | K | 0 | 0 | 0 | 0 | $0.00 | $0.00 | $0.00 | $0.00 | |
| **Total** | **Grade K** | **273** | **21** | **21** | | | **$682,194.57** | | **$140,718.21** | **$6,700.87** |
| **Conciliatory** | | | | | | | | | | |
| Regular Ed | K | 206 | 0 | 10 | 20.6 | $45,123.03 | $451,230.30 | $2,190.44 | $0.00 | |
| Inclusion Team | K | 60 | 14 | 3 | 20 | $68,754.44 | $206,263.32 | $3,437.72 | $48,128.11 | |
| Self-Contained | K | 7 | 7 | 1 | 7 | $46,906.07 | $46,906.07 | $6,700.87 | $46,906.07 | |
| **Total** | **Grade K** | **273** | **21** | **14** | | | **$704,399.69** | | **$95,034.18** | **$4,525.44** |



BEST COPY AVAILABLE

Worksheet Table 5 displays some of the school district's Grade 1-4 program options and their costs as well as the configurations utilized during the 1997–98 school year with the selected personnel ingredients responsible for the cost of the Full Inclusion Model's Adaptive Instruction Team (AIT) and the Conciliatory Model's Inclusion or Program Team. Worksheet Table 6 and Table 7 present the costs for implementing all three models at the district's Park View Elementary School and Fort Salonga Elementary School respectively

**Table 5**

**District's Nondepartmentalized Ingredients/Options/Costs for 6 Hour and 40 Minute Day and 180 day School Year**

| At $71,781.56, Ave. District K-4 Teacher's Salary with Benefits<br>Represents 16 years experience and 80% with MA | | | | At $75,977.49, Ave. District K-4 SPED Teacher's Salary with Benefits<br>Represents 16 years of experience and 100% with MA | | | |
|---|---|---|---|---|---|---|---|
| **Program** | **Section Cost** | **Class Size** | **Cost/Stud** | **Program** | **Section Cost** | **Class Size** | **Cost/Stud** |
| **Regular Class Gr 1-4** | $63,706.13 | 18 | $3,539.23 | **SPED Self Contained Class** | $67,430.02 | 12 | $5,619.17 |
| One classroom teacher | | 19 | $3,352.95 | One classroom teacher | | 11 | $6,130.00 |
| | | 20 | $3,185.31 | | | 10 | $6,743.00 |
| | | 21 | $3,033.63 | | | 9 | $7,492.22 |
| | | 22 | $2,895.73 | | | 8 | $8,428.75 |
| | | 23 | $2,769.83 | | | 7 | $9,632.86 |
| | | | | | | 6 | $11,238.34 |
| **Regular Class Gr 1-4** | $81,023.31 | 18 | $4,501.30 | **SPED Self Contained Class** | $84,747.20 | 12 | $7,062.27 |
| Adding full-time TA | | 19 | $4,264.38 | Adding full-time TA | | 11 | $7,704.29 |
| for $17,317.18 | | 20 | $4,051.17 | For $17,317.18 | | 10 | $8,474.72 |
| | | 21 | $3,858.25 | | | 9 | $9,416.36 |
| | | 22 | $3,682.88 | | | 8 | $10,593.40 |
| | | 23 | $3,522.75 | | | 7 | $12,106.74 |
| | | | | | | 6 | $14,124.53 |
| **Regular Class Gr 1-4** | $83,535.39 | 18 | $4,640.86 | **SPED Self Contained Class** | $87,259.28 | 12 | $7,271.61 |
| with full-time TA | | 19 | $4,396.60 | with full-time TA | | 11 | $7,932.66 |
| Adding 2-30 min reading per/wk | | 20 | $4,176.77 | Adding 2-30 min reading per/wk | | 10 | $8,725.93 |
| With specialist for $2, 512.08 | | 21 | $3,977.88 | With specialist for $2, 512.08 | | 9 | $9,695.48 |
| | | 22 | $3,797.06 | | | 8 | $10,907.41 |
| | | 23 | $3,631.97 | | | 7 | $12,465.61 |
| | | | | | | 6 | $14,543.21 |
| **Regular Class Gr 1-4** | $86,980.59 | 18 | $4,832.26 | **SPED Self Contained Class** | $97,129.24 | 12 | $8,094.10 |
| with full-time TA | | 19 | $4,577.93 | with full-time TA | | 11 | $8,829.93 |
| With 2-30 min reading per/wk | | 20 | $4,349.03 | with 2-30 min reading per/wk | | 10 | $9,712.92 |
| Adding 1-40 min/day special: | | 21 | $4,141.93 | Adding 1-40 min/day special: | | 9 | $10,792.14 |
| Art, Mu, PE, Lib, Comp at $9,869.96 | | 22 | $3,953.66 | Art, Mu, PE, Lib, Comp at $9,869.96 | | 8 | $12,141.16 |
| | | 23 | $3,781.76 | | | 7 | $13,875.61 |
| | | | | | | 6 | $16,188.21 |
| **1997-98 School District Grade 1-4 Configurations** | | | | | | | |
| **Regular Class Gr 1-4** | $73,576.09 | 18 | $4,087.56 | **SPED Self Contained Class** | $94,617.16 | 12 | $7,884.76 |
| Includes 1-40 min/day special: | | 19 | $3,872.43 | with full-time TA | | 11 | $8,601.56 |
| Art, Mu, PE, Lib, Comp at $9,869.96 | | 20 | $3,678.80 | Includes 1-40 min/day special: | | 10 | $9,461.72 |
| | | 21 | $3,503.62 | Art, Mu, PE, Lib, Comp at $9,869.96 | | 9 | $10,513.02 |
| | | 22 | $3,344.37 | | | 8 | $11,827.15 |
| | | 23 | $3,198.96 | | | 7 | $13,516.74 |
| | | 24 | $3,065.67 | | | 6 | $15,769.53 |
| | | | | **SPED Resource Room Class** | $12,916.17 | 5 | $2,583.23 |
| | | | | 1 hour per day | | 4 | $3,229.04 |
| | | | | | | 3 | $4,305.39 |
| | | | | | | 2 | $6,458.09 |
| | | | | Student in regular class of 22 | | 22 | $3,344.37 |
| | | | | Receiving resource room class of 5 | | 5 | $2,583.23 |
| | | | | **SPED Cost for RR Student** | | | **$5,927.60** |
| **Grade 1-4 Inclusion Team Program** | | | | **Grade 1-4 Conciliatory Team Program** | | | |
| Regular Gr 1-4 Program | $ 73,576.09 | | | Regular Gr 1-4 Program | $ 73,576.09 | | |
| Add Special Education Teacher | $ 67,430.02 | | | Add Special Education Teacher | $ 67,430.02 | | |
| add Teacher Assistant | $ 17,317.08 | | | | | | |
| **Total Cost of Team for Year** | $ 158,323.19 | 22 | $ 7,196.51 | **Total Cost of Team for Year** | $ 141,006.11 | 22 | $6,409.37 |
| | | 23 | $ 6,883.62 | | | 23 | $6,130.70 |
| | | 24 | $ 6,596.80 | | | 24 | $5,875.25 |

**Table 6**

**Park View Elementary School Model Cost Comparisons**

| Model | Grade | Tot Served | Inc SPED | Sections | Ave Size | Unit | Cost | Cost/Stu | SPED Cost | Per Student |
|---|---|---|---|---|---|---|---|---|---|---|
| **Inclusion** | | | | | | | | | | |
| Regular Ed | 1 | 84 | 0 | 4 | 21 | $73,576.09 | $294,304.36 | $3,503.62 | $0.00 | |
| A I Team | 1 | 44 | 13 | 2 | 22 | $158,323.29 | $316,646.58 | $7,196.51 | $93,554.67 | |
| **Total** | **Grade 1** | **128** | **13** | **6** | | | **$610,950.94** | | **$93,554.67** | **$7,196.51** |
| **Conservationist** | | | | | | | | | | |
| Regular Ed | 1 | 119 | 4 | 5 | 23.8 | $73,576.09 | $367,880.45 | $3,091.43 | $12,365.73 | |
| Self-Contained | 1 | 9 | 9 | 1 | 9 | $94,617.16 | $94,617.16 | $10,513.02 | $94,617.16 | |
| Resource Room | 1 | 4 | 4 | 1 | 4 | $12,916.17 | $12,916.17 | $3,229.04 | $12,916.17 | |
| **Total** | **Grade 1** | **128** | **13** | **6** | | | **$475,413.78** | | **$119,899.06** | **$9,223.00** |
| **Conciliatory** | | | | | | | | | | |
| Regular Ed | 1 | 84 | 0 | 4 | 21 | $73,576.09 | $294,304.36 | $3,503.62 | $0.00 | |
| Inclusion Team | 1 | 44 | 13 | 2 | 22 | $141,006.11 | $282,012.22 | $6,409.37 | $83,321.79 | |
| Resource Room | 1 | 9 | 9 | 2 | 4.5 | $12,916.17 | $25,832.34 | $2,870.26 | $25,832.34 | |
| **Total** | **Grade 1** | **128** | **13** | **6** | | | **$602,148.92** | | **$109,154.13** | **$8,396.47** |
| **Inclusion** | | | | | | | | | | |
| Regular Ed | 2 | 80 | 0 | 4 | 20 | $73,576.09 | $294,304.36 | $3,678.80 | $0.00 | |
| A I Team | 2 | 59 | 18 | 3 | 19.6667 | $158,323.29 | $474,969.87 | $8,050.34 | $144,906.06 | |
| **Total** | **Grade 2** | **139** | **18** | **7** | | | **$769,274.23** | | **$144,906.06** | **$8,050.34** |
| **Conservationist** | | | | | | | | | | |
| Regular Ed | 2 | 128 | 7 | 6 | 21.3333 | $73,576.09 | $441,456.54 | $3,448.88 | $24,142.15 | |
| Self-Contained | 2 | 11 | 11 | 2 | 5.5 | $94,617.16 | $189,234.32 | $17,203.12 | $189,234.32 | |
| Resource Room | 2 | 7 | 7 | 2 | 3.5 | $12,916.17 | $25,832.34 | $3,690.33 | $25,832.34 | |
| **Total** | **Grade 2** | **139** | **18** | **8** | | | **$656,523.20** | | **$239,208.81** | **$13,289.38** |
| **Conciliatory** | | | | | | | | | | |
| Regular Ed | 2 | 80 | 0 | 4 | 20 | $73,576.09 | $294,304.36 | $3,678.80 | $0.00 | |
| Inclusion Team | 2 | 59 | 18 | 3 | 19.6667 | $141,006.11 | $423,018.33 | $7,169.80 | $129,056.44 | |
| Resource Room | 2 | 11 | 11 | 3 | 3.66667 | $12,916.17 | $38,748.51 | $3,522.59 | $38,748.51 | |
| **Total** | **Grade 2** | **139** | **18** | **7** | | | **$756,071.20** | | **$167,804.95** | **$9,322.50** |
| **Inclusion** | | | | | | | | | | |
| Regular Ed | 3 | 89 | 0 | 4 | 22.25 | $73,576.09 | $294,304.36 | $3,306.79 | $0.00 | |
| A I Team | 3 | 63 | 20 | 3 | 21 | $158,323.29 | $474,969.87 | $7,539.20 | $150,784.09 | |
| **Total** | **Grade 3** | **152** | **20** | **7** | | | **$769,274.23** | | **$150,784.09** | **$7,539.20** |
| **Conservationist** | | | | | | | | | | |
| Regular Ed | 3 | 140 | 8 | 6 | 23.3333 | $73,576.09 | $441,456.54 | $3,153.26 | $25,226.09 | |
| Self-Contained | 3 | 12 | 12 | 2 | 6 | $94,617.16 | $189,234.32 | $15,769.53 | $189,234.32 | |
| Resource Room | 3 | 8 | 8 | 2 | 4 | $12,916.17 | $25,832.34 | $3,229.04 | $25,832.34 | |
| **Total** | **Grade 3** | **152** | **20** | **8** | | | **$656,523.20** | | **$240,292.75** | **$12,014.64** |
| **Conciliatory** | | | | | | | | | | |
| Regular Ed | 3 | 89 | 0 | 4 | 22.25 | $73,576.09 | $294,304.36 | $3,306.79 | $0.00 | |
| Inclusion Team | 3 | 63 | 20 | 3 | 21 | $141,006.11 | $423,018.33 | $6,714.58 | $134,291.53 | |
| Resource Room | 3 | 12 | 8 | 2 | 6 | $12,916.17 | $25,832.34 | $2,152.70 | $17,221.56 | |
| **Total** | **Grade 3** | **152** | **20** | **7** | | | **$743,155.03** | | **$151,513.09** | **$7,575.65** |
| **Inclusion** | | | | | | | | | | |
| Regular Ed | 4 | 105 | 0 | 5 | 21 | $73,576.09 | $367,880.45 | $3,503.62 | $0.00 | |
| A I Team | 4 | 40 | 12 | 2 | 20 | $158,323.29 | $316,646.58 | $7,916.16 | $94,993.97 | |
| **Total** | **Grade 4** | **145** | **12** | **7** | | | **$684,527.03** | | **$94,993.97** | **$7,916.16** |
| **Conservationist** | | | | | | | | | | |
| Regular Ed | 4 | 145 | 12 | 7 | 20.7143 | $73,576.09 | $515,032.63 | $3,551.95 | $42,623.39 | |
| Self-Contained | 4 | 0 | 0 | 0 | 0 | $0.00 | $0.00 | $0.00 | $0.00 | |
| Resource Room | 4 | 12 | 12 | 3 | 4 | $12,916.17 | $38,748.51 | $3,229.04 | $38,748.51 | |
| **Total** | **Grade 4** | **145** | **12** | **7** | | | **$553,781.14** | | **$81,371.90** | **$6,780.99** |
| **Conciliatory** | | | | | | | | | | |
| Regular Ed | 4 | 105 | 0 | 5 | 21 | $73,576.09 | $367,880.45 | $3,503.62 | $0.00 | |
| Inclusion Team | 4 | 40 | 12 | 2 | 20 | $141,006.11 | $282,012.22 | $7,050.31 | $84,603.67 | |
| Resource Room | 0 | 0 | 0 | 0 | 0 | $12,916.17 | $0.00 | $0.00 | $0.00 | |
| **Total** | **Grade 4** | **145** | **12** | **7** | | | **$649,892.67** | | **$84,603.67** | **$7,050.31** |



BEST COPY AVAILABLE

**Table 7**

**Fort Salonga Elementary School Model Cost Comparisons**

| Model | Grade | Tot Served | Inc SPED | Sections | Ave Size | Unit | Cost | Cost/Stu | SPED Cost | Per Student |
|---|---|---|---|---|---|---|---|---|---|---|
| **Inclusion** | | | | | | | | | | |
| Regular Ed | 1 | 126 | 0 | 6 | 21 | $73,576.09 | $441,456.54 | $3,503.62 | $0.00 | |
| A I Team | 1 | 42 | 10 | 2 | 21 | $158,323.29 | $316,646.58 | $7,539.20 | $75,392.04 | |
| **Total** | **Grade 1** | **168** | **10** | **8** | | | **$758,103.12** | | **$75,392.04** | **$7,539.20** |
| **Conservationist** | | | | | | | | | | |
| Regular Ed | 1 | 168 | 10 | 8 | 21 | $73,576.09 | $588,608.72 | $3,503.62 | $35,036.23 | |
| Self-Contained | 1 | 0 | 0 | 0 | 0 | $94,617.16 | $0.00 | $0.00 | $0.00 | |
| Resource Room | 1 | 10 | 10 | 2 | 5 | $12,916.17 | $25,832.34 | $2,583.23 | $25,832.34 | |
| **Total** | **Grade 1** | **168** | **10** | **10** | | | **$614,441.06** | | **$60,868.57** | **$6,086.86** |
| **Conciliatory** | | | | | | | | | | |
| Regular Ed | 1 | 126 | 0 | 6 | 21 | $73,576.09 | $441,456.54 | $3,503.62 | $0.00 | |
| Inclusion Team | 1 | 42 | 10 | 2 | 21 | $141,006.11 | $282,012.22 | $6,714.58 | $67,145.77 | |
| Resource Room | 1 | 0 | 0 | 0 | 0 | $12,916.17 | $0.00 | $0.00 | $0.00 | |
| **Total** | **Grade 1** | **168** | **10** | **8** | | | **$723,468.76** | | **$67,145.77** | **$6,714.58** |
| **Inclusion** | | | | | | | | | | |
| Regular Ed | 2 | 111 | 0 | 5 | 22.2 | $73,576.09 | $367,880.45 | $3,314.24 | $0.00 | |
| A I Team | 2 | 44 | 6 | 2 | 22 | $158,323.29 | $316,646.58 | $7,196.51 | $43,179.06 | |
| **Total** | **Grade 2** | **155** | **6** | **7** | | | **$684,527.03** | | **$43,179.06** | **$7,196.51** |
| **Conservationist** | | | | | | | | | | |
| Regular Ed | 2 | 155 | 6 | 7 | 22.14 | $73,576.09 | $515,032.63 | $3,322.79 | $19,936.75 | |
| Self-Contained | 2 | 0 | 0 | 0 | 0 | $94,617.16 | $0.00 | $0.00 | $0.00 | |
| Resource Room | 2 | 10 | 6 | 2 | 3 | $12,916.17 | $25,832.34 | $2,583.23 | $15,499.40 | |
| **Total** | **Grade 2** | **155** | **6** | **7** | | | **$540,864.97** | | **$35,436.15** | **$5,906.03** |
| **Conciliatory** | | | | | | | | | | |
| Regular Ed | 2 | 111 | 0 | 5 | 22.2 | $73,576.09 | $367,880.45 | $3,314.24 | $0.00 | |
| Inclusion Team | 2 | 44 | 6 | 2 | 22 | $141,006.11 | $282,012.22 | $6,409.37 | $38,456.21 | |
| Resource Room | 2 | 0 | 0 | 0 | 0 | $12,916.17 | $0.00 | $0.00 | $0.00 | |
| **Total** | **Grade 2** | **155** | **6** | **7** | | | **$649,892.67** | | **$38,456.21** | **$6,409.37** |
| **Inclusion** | | | | | | | | | | |
| Regular Ed | 3 | 121 | 0 | 6 | 20.16 | $73,576.09 | $441,456.54 | $3,648.40 | $0.00 | |
| A I Team | 3 | 42 | 9 | 2 | 21 | $158,323.29 | $316,646.58 | $7,539.20 | $67,852.84 | |
| **Total** | **Grade 3** | **163** | **9** | **8** | | | **$758,103.12** | | **$67,852.84** | **$7,539.20** |
| **Conservationist** | | | | | | | | | | |
| Regular Ed | 3 | 163 | 9 | 8 | 20.125 | $73,576.09 | $588,608.72 | $3,611.10 | $32,499.87 | |
| Self-Contained | 0 | 0 | 0 | 0 | 0 | $94,617.16 | $0.00 | $0.00 | $0.00 | |
| Resource Room | 3 | 9 | 9 | 2 | 4.5 | $12,916.17 | $25,832.34 | $2,870.26 | $25,832.34 | |
| **Total** | **Grade 3** | **163** | **9** | **8** | | | **$614,441.06** | | **$58,332.21** | **$6,481.36** |
| **Conciliatory** | | | | | | | | | | |
| Regular Ed | 3 | 121 | 0 | 6 | 20.16 | $73,576.09 | $441,456.54 | $3,648.40 | $0.00 | |
| Inclusion Team | 3 | 42 | 9 | 2 | 21 | $141,006.11 | $282,012.22 | $6,714.58 | $60,431.19 | |
| Resource Room | 3 | 0 | 0 | 0 | 0 | $12,916.17 | $0.00 | $0.00 | $0.00 | |
| **Total** | **Grade 3** | **163** | **9** | **8** | | | **$723,468.76** | | **$60,431.19** | **$6,714.58** |
| **Inclusion** | | | | | | | | | | |
| Regular Ed | 4 | 105 | 0 | 5 | 21 | $73,576.09 | $367,880.45 | $3,503.62 | $0.00 | |
| A I Team | 4 | 43 | 11 | 2 | 21.5 | $158,323.29 | $316,646.58 | $7,363.87 | $81,002.61 | |
| **Total** | **Grade 4** | **148** | **11** | **7** | | | **$684,527.03** | | **$81,002.61** | **$7,363.87** |
| **Conservationist** | | | | | | | | | | |
| Regular Ed | 4 | 148 | 11 | 7 | 21.14 | $73,576.09 | $515,032.63 | $3,479.95 | $38,279.45 | |
| Self-Contained | 4 | 0 | 0 | 0 | 0 | $0.00 | $0.00 | $0.00 | $0.00 | |
| Resource Room | 4 | 11 | 11 | 3 | 3.67 | $12,916.17 | $38,748.51 | $3,522.59 | $38,748.51 | |
| **Total** | **Grade 4** | **148** | **11** | **7** | | | **$953,781.14** | | **$77,027.96** | **$7,002.54** |
| **Conciliatory** | | | | | | | | | | |
| Regular Ed | 4 | 105 | 0 | 5 | 21 | $73,576.09 | $367,880.45 | $3,503.62 | $0.00 | |
| Inclusion Team | 4 | 43 | 11 | 2 | 21.5 | $141,006.11 | $282,012.22 | $6,558.42 | $72,142.66 | |
| Resource Room | 4 | 0 | 0 | 0 | 0 | $12,916.17 | $0.00 | $0.00 | $0.00 | |
| **Total** | **Grade 4** | **148** | **11** | **7** | | | **$649,892.67** | | **$72,142.66** | **$6,558.42** |



BEST COPY AVAILABLE

**Departmentalized Secondary Level Instructional Personnel Costs and Model Comparisons**

Table 8 and Table 9 which follow present the instructional costs for the implementation of the study's three models in the district's departmentalized middle school and high school respectively, and are based on slightly higher salaries related to teaching experience and professional preparation. The district's average annual salary with benefits for the 152 middle school and high school regular education teachers providing services to special education students was $78,535. The salary reflects an average of 20 years of teaching experience and 85 percent of the teachers with at least a masters degree. The district's average annual salary with benefits for the district's 18 middle school and high school special education teachers was $79,699. The salary also reflects an average of 20 years of teaching experience, but with almost 100 percent of the special education teachers having a masters degree and over 50 percent of them having 30 credit hours beyond the masters degree.

At the district's middle school, a daily 41-minute period of instruction taught by a regular education teacher averaged $9,503 per year, and an eight-period day with a 17-minute advisory period averaged $70,452 for the year. A self-contained special education program at the middle school included four core subjects and an advisory period taught by a special education teacher with a teacher assistant, and two specials (music, art, technology, physical education, foreign language) taught by regular education teachers for an annual cost of $88,526. A period per day of resource room taught by a special education teacher had an average annual cost of $9,644.

At the district's high school where all instruction was provided in 80-minute blocks, a major subject taught by a regular education teacher totaled $10,604 for the year. An average regular high school program of four instructional blocks per day averaged $88,834 for the year. A self -contained special education program which included a special education teacher and a

teacher assistant for four major subject blocks and two additional elective blocks taught by regular education teachers totaled $103,602 for the year. A single resource room program meeting every other day for 80 minutes and taught by a special education teacher had an annual cost of $12,432. Resource room sections meeting only once in the four day rotation had an average annual cost of $6,216.

**Table 8**

W. T. Rogers Middle School Model Cost Comparisons

| Model | Grade | Tot Served | Inc SPED | Sections | Ave Size | Unit | Cost | Cost/Stu | SPED Cost | Cost SE/Stu |
|---|---|---|---|---|---|---|---|---|---|---|
| Inclusion | 5 | | | | | | | | | |
| Regular Ed | 5 | 137 | 0 | 6 | 22.8333 | $70,074.29 | $420,445.74 | $3,068.95 | $0.00 | |
| A I Team | 5 | 136 | 42 | 6 | 22.6667 | $135,609.57 | $813,657.42 | $5,982.78 | $251,276.56 | |
| **Total** | **Grade 5** | **273** | **42** | **12** | | | **$1,234,103.16** | | **$251,276.56** | **$ 5,982.78** |
| | | | | | | | | | | |
| Conservationist | 5 | | | | | | | | | |
| Regular Ed | 5 | 264 | 33 | 11 | 24 | $70,074.29 | $770,817.19 | $2,919.76 | $96,352.15 | |
| Self-Contained | 5 | 9 | 9 | 1 | 9 | $87,391.47 | $87,391.47 | $9,710.16 | $87,391.47 | |
| Resource Room | 5 | 33 | 33 | 7 | 4.71429 | $9,643.62 | $67,505.34 | $2,045.62 | $67,505.34 | |
| **Total** | **Grade 5** | **273** | **42** | **12** | | | **$925,714.00** | | **$251,248.96** | **$ 5,982.12** |
| | | | | | | | | | | |
| Conciliatory | 5 | | | | | | | | | |
| Regular Ed | 5 | 137 | 0 | 6 | 22.8333 | $70,074.29 | $420,445.74 | $3,068.95 | $0.00 | |
| Inclusion Team | 5 | 136 | 42 | 6 | 22.6667 | $118,292.39 | $709,754.34 | $5,218.78 | $219,188.84 | |
| Resource Room | 5 | 9 | 9 | 2 | 4.5 | $9,643.62 | $19,287.24 | $2,143.03 | $19,287.24 | |
| **Total** | **Grade 5** | **273** | **42** | **12** | | | **$1,149,487.32** | | **$238,476.08** | **$ 5,678.00** |
| | | | | | | | | | | |
| Inclusion | 6 | | | | | | | | | |
| Regular Ed | 6 | 135 | 0 | 6 | 22.5 | $70,452.18 | $422,713.08 | $3,131.21 | $0.00 | |
| A I Team | 6 | 157 | 33 | 7 | 22.4286 | $135,987.46 | $951,912.22 | $6,063.14 | $200,083.46 | |
| **Total** | **Grade 6** | **292** | **33** | **13** | | | **$1,374,625.30** | | **$200,083.46** | **$ 6,063.14** |
| | | | | | | | | | | |
| Conservationist | 6 | | | | | | | | | |
| Regular Ed | 6 | 283 | 24 | 12 | 23.5833 | $70,452.18 | $845,426.16 | $2,987.37 | $71,696.92 | |
| Self-Contained | 6 | 9 | 9 | 1 | 9 | 88,525.87 | $88,525.87 | $9,836.21 | $88,525.87 | |
| Resource Room | 6 | 24 | 24 | 5 | 4.8 | $9,643.62 | $48,218.10 | $2,009.09 | $48,218.10 | |
| **Total** | **Grade 6** | **292** | **33** | **13** | | | **$982,170.13** | | **$208,440.89** | **$ 6,316.39** |
| | | | | | | | | | | |
| Conciliatory | 6 | | | | | | | | | |
| Regular Ed | 6 | 135 | 0 | 6 | 22.5 | $70,452.18 | $422,713.08 | $0.00 | $0.00 | |
| Inclusion Team | 6 | 157 | 33 | 7 | 22.4286 | $118,670.28 | $830,691.96 | $5,291.03 | $174,604.04 | |
| Resource Room | 6 | 9 | 9 | 2 | 4.5 | $9,643.62 | $19,287.24 | $2,143.03 | $19,287.24 | |
| **Total** | **Grade 6** | **292** | **33** | **13** | | | **$1,272,692.28** | | **$193,891.28** | **$ 5,875.49** |
| | | | | | | | | | | |
| Inclusion | 7 | | | | | | | | | |
| Regular Ed | 7 | 196 | 0 | 8 | 24.5 | $70,452.18 | $563,617.44 | $2,875.60 | $0.00 | |
| A I Team | 7 | 86 | 22 | 4 | 21.5 | $135,987.46 | $543,949.84 | $6,325.00 | $139,149.96 | |
| **Total** | **Grade 7** | **282** | **22** | **12** | | | **$1,107,567.28** | | **$139,149.96** | **$ 6,325.00** |
| | | | | | | | | | | |
| Conservationist | | | | | | | | | | |
| Regular Ed | 7 | 276 | 16 | 12 | 23 | $70,452.18 | $845,426.16 | $3,063.14 | $49,010.21 | |
| Self-Contained | 7 | 6 | 6 | 1 | 6 | 88,525.87 | $88,525.87 | $14,754.31 | $88,525.87 | |
| Resource Room | 7 | 16 | 16 | 4 | 4 | $9,643.62 | $38,574.48 | $2,410.91 | $38,574.48 | |
| **Total** | **Grade 7** | **282** | **22** | **13** | | | **$972,526.51** | | **$176,110.56** | **$ 8,005.03** |
| | | | | | | | | | | |
| Conciliatory | 7 | | | | | | | | | |
| Regular Ed | 7 | 196 | 0 | 8 | 24.5 | $70,452.18 | $563,617.44 | $2,875.60 | $0.00 | |
| Inclusion Team | 7 | 86 | 22 | 3 | 28.6667 | $118,670.28 | $356,010.84 | $4,139.66 | $91,072.54 | |
| Resource Room | 7 | 6 | 6 | 2 | 3 | $9,643.62 | $19,287.24 | $3,214.54 | $19,287.24 | |
| **Total** | **Grade 7** | **282** | **22** | **11** | | | **$938,915.52** | | **$110,359.78** | **$ 5,016.35** |
| | | | | | | | | | | |
| Inclusion | 8 | | | | | | | | | |
| Regular Ed | 8 | 112 | 0 | 5 | 22.4 | $70,452.18 | $352,260.90 | $3,145.19 | $0.00 | |
| A I Team | 8 | 173 | 46 | 7 | 24.7143 | $135,987.46 | $951,912.22 | $5,502.38 | $253,109.61 | |
| **Total** | **Grade 8** | **285** | **46** | **12** | | | **$1,304,173.12** | | **$253,109.61** | **$ 5,502.38** |
| | | | | | | | | | | |
| Conservationist | 8 | | | | | | | | | |
| Regular Ed | 8 | 261 | 22 | 11 | 23.7273 | $70,452.18 | $774,973.98 | $2,969.25 | $65,323.48 | |
| Self-Contained | 8 | 24 | 24 | 3 | 8 | 88,525.87 | $265,577.61 | $11,065.73 | $265,577.61 | |
| Resource Room | 8 | 22 | 22 | 5 | 4.4 | $9,643.62 | $48,218.10 | $2,191.73 | $48,218.10 | |
| **Total** | **Grade 8** | **285** | **46** | **14** | | | **$1,088,769.69** | | **$379,119.19** | **$ 8,241.72** |
| | | | | | | | | | | |
| Conciliatory | 8 | | | | | | | | | |
| Regular Ed | 8 | 112 | 0 | 5 | 22.4 | $70,452.18 | $352,260.90 | $3,145.19 | $0.00 | |
| Inclusion Team | 8 | 173 | 46 | 7 | 24.7143 | $118,670.28 | $830,691.96 | $4,801.69 | $220,877.63 | |
| Resource Room | 8 | 24 | 24 | 5 | 4.8 | $9,643.62 | $48,218.10 | $2,009.09 | $48,218.10 | |
| **Total** | **Grade 8** | **285** | **46** | **12** | | | **$1,231,170.96** | | **$269,095.73** | **$ 5,849.91** |



BEST COPY AVAILABLE

**Table 9**

Senior High School Model Cost Comparisons

| Model | Grade | Tot Served | Inc SPED | Sections | Ave Size | Unit | Cost | Cost/Stu | SPED Cost | SE COST/Stu |
|---|---|---|---|---|---|---|---|---|---|---|
| **Inclusion** | **9** | | | | | | | | | |
| Regular Ed | 9 | 120 | 0 | 5 | 24 | $84,834.40 | $424,172.00 | $3,534.77 | $0.00 | |
| AI Team | 9 | 107 | 36 | 5 | 21.4 | $188,436.82 | $942,184.10 | $8,805.46 | $316,996.52 | |
| **Total** | **Grade 9** | **227** | **36** | **10** | | | **$1,366,356.10** | | **$316,996.52** | **$8,805.46** |
| **Conservationist** | **9** | | | | | | | | | |
| Regular Ed | 9 | 213 | 22 | 9 | 23.6667 | $84,834.40 | $763,509.60 | $3,584.55 | $78,860.15 | |
| Self-Contained | 9 | 14 | 14 | 2 | 7 | $103,602.42 | $207,204.84 | $14,800.35 | $207,204.84 | |
| Resource Room | 9 | 12 | 12 | 3 | 4 | $12,432.00 | $37,296.00 | $3,108.00 | $37,296.00 | |
| **Total** | **Grade 9** | **227** | **36** | **11** | | | **$1,008,010.44** | | **$323,360.99** | **$8,982.25** |
| **Conciliatory** | **9** | | | | | | | | | |
| Regular Ed | 9 | 120 | 0 | 5 | 24 | $84,834.40 | $424,172.00 | $3,534.77 | $0.00 | |
| Mod Inclusion Team | 9 | 107 | 36 | 5 | 21.4 | $170,925.76 | $854,628.80 | $7,987.19 | $287,538.66 | |
| Resource Room | 9 | 14 | 14 | 3 | 4.66667 | $6,216.00 | $18,648.00 | $1,332.00 | $18,648.00 | |
| **Total** | **Grade 9** | **227** | **36** | **10** | | | **$1,297,448.80** | | **$306,186.66** | **$8,505.19** |
| **Inclusion** | **10** | | | | | | | | | |
| Regular Ed | 10 | 125 | 0 | 5 | 25 | $84,834.40 | $424,172.00 | $3,393.38 | $0.00 | |
| AI Team | 10 | 122 | 36 | 5 | 24.4 | $188,436.82 | $942,184.10 | $7,722.82 | $278,021.54 | |
| **Total** | **Grade 10** | **247** | **36** | **10** | | | **$1,366,356.10** | | **$278,021.54** | **$7,722.82** |
| **Conservationist** | **10** | | | | | | | | | |
| Regular Ed | 10 | 236 | 25 | 10 | 23.6 | $84,834.40 | $848,344.00 | $3,594.68 | $89,866.95 | |
| Self-Contained | 10 | 11 | 11 | 1 | 11 | 88,467.23 | $88,467.23 | $8,042.48 | $88,467.23 | |
| Resource Room | 10 | 15 | 15 | 3 | 5 | $12,432.00 | $37,296.00 | $2,486.40 | $37,296.00 | |
| **Total** | **Grade 10** | **247** | **36** | **11** | | | **$974,107.23** | | **$215,630.18** | **$5,989.73** |
| **Conciliatory** | **10** | | | | | | | | | |
| Regular Ed | 10 | 125 | 0 | 5 | 25 | $84,834.40 | $424,172.00 | $0.00 | $0.00 | |
| Mod Inclusion Team | 10 | 122 | 36 | 5 | 24.4 | $170,925.76 | $854,628.80 | $7,005.15 | $252,185.55 | |
| Resource Room | 10 | 11 | 11 | 3 | 3.7 | $6,216.00 | $18,648.00 | $1,243.20 | $18,648.00 | |
| **Total** | **Grade 10** | **247** | **36** | **10** | | | **$1,297,448.80** | | **$270,833.55** | **$7,523.15** |
| **Inclusion** | **11** | | | | | | | | | |
| Regular Ed | 11 | 125 | 0 | 5 | 25 | $84,834.40 | $424,172.00 | $3,393.38 | $0.00 | |
| AI Team | 11 | 120 | 38 | 5 | 24 | $188,436.82 | $942,184.10 | $7,851.53 | $298,358.30 | |
| **Total** | **Grade 11** | **245** | **38** | **10** | | | **$1,366,356.10** | | **$298,358.30** | **$7,851.53** |
| **Conservationist** | 11 | | | | | | | | | |
| Regular Ed | 11 | 231 | 24 | 9 | 25.6667 | $84,834.40 | $763,509.60 | $3,305.24 | $79,325.67 | |
| Self-Contained | 11 | 14 | 14 | 2 | 7 | 88,467.23 | $176,934.46 | $12,638.18 | $176,934.46 | |
| Resource Room | 11 | 13 | 13 | 3 | 4.33333 | $12,432.00 | $37,296.00 | $2,868.92 | $37,296.00 | |
| **Total** | **Grade 11** | **245** | **38** | **11** | | | **$977,740.06** | | **$293,556.13** | **$7,725.16** |
| **Conciliatory** | **11** | | | | | | | | | |
| Regular Ed | 11 | 125 | 0 | 5 | 25 | $84,834.40 | $424,172.00 | $3,393.38 | $0.00 | |
| Mod Inclusion Team | 11 | 120 | 38 | 5 | 24 | $170,925.76 | $854,628.80 | $7,121.91 | $270,632.45 | |
| Resource Room | 11 | 14 | 14 | 3 | 4.66667 | $6,216.00 | $18,648.00 | $1,332.00 | $18,648.00 | |
| **Total** | **Grade 11** | **245** | **38** | **10** | | | **$1,297,448.80** | | **$289,280.45** | **$7,612.64** |
| **Inclusion** | **12** | | | | | | | | | |
| Regular Ed | 12 | 115 | 0 | 5 | 23 | $84,834.40 | $424,172.00 | $3,688.45 | $0.00 | |
| AI Team | 12 | 102 | 23 | 4 | 25.5 | $188,436.82 | $753,747.28 | $7,389.68 | $169,962.62 | |
| **Total** | **Grade 12** | **217** | **23** | **9** | | | **$1,177,919.28** | | **$169,962.62** | **$7,389.68** |
| **Conservationist** | **12** | | | | | | | | | |
| Regular Ed | 12 | 207 | 13 | 9 | 23 | $84,834.40 | $763,509.60 | $3,688.45 | $47,949.88 | |
| Self-Contained | 12 | 10 | 10 | 1 | 10 | 88,467.23 | $88,467.23 | $8,846.72 | $88,467.23 | |
| Resource Room | 12 | 4 | 4 | 1 | 4 | $12,432.00 | $12,432.00 | $3,108.00 | $12,432.00 | |
| **Total** | **Grade 12** | **217** | **23** | **10** | | | **$864,408.83** | | **$148,849.11** | **$6,471.70** |
| **Conciliatory** | **12** | | | | | | | | | |
| Regular Ed | 12 | 115 | 0 | 5 | 23 | $84,834.40 | $424,172.00 | $3,688.45 | $0.00 | |
| Mod Inclusion Team | 12 | 102 | 23 | 4 | 25.5 | $170,925.76 | $683,703.04 | $6,702.97 | $154,168.33 | |
| Resource Room | 12 | 10 | 10 | 2 | 5 | $6,216.00 | $12,432.00 | $1,243.20 | $12,432.00 | |
| **Total** | **Grade12** | **217** | **23** | **9** | | | **$1,120,307.04** | | **$166,600.33** | **$7,243.49** |

**Instructional Personnel Cost Comparison Totals**

Table 10 which follows displays a comparison of the costs for both regular education instruction personnel and special education instruction personnel for each model in each of the district's five schools: The Early Childhood Center's One-Half Day Kindergarten Program, the Park View Elementary School's Grade 1-4 Program, the Fort Salonga Elementary School's Grade 1-4 Program, the William T. Rogers Middle School's Grade 5-8 Program, and the Kings Park Senior High School's Grade 9-12 Program.

**Table 10**

Instructional Personnel Cost Comparison Totals

| | School | SPED/Reg | Full Inclusion Model | Conservationist Model | Conciliatory Model |
|---|---|---|---|---|---|
| Personnel | ECC | SPED | $ 86,319.18 | $ 140,718.21 | $ 95,034.18 |
| Nondepartmentlized | ECC | Reg Ed | $ 739,144.44 | $ 541,476.36 | $ 609,365.51 |
| | ECC | Total | $ 825,463.62 | $ 682,194.57 | $ 514,331.33 |
| | PV | SPED | $ 484,238.79 | $ 680,772.52 | $ 513,075.84 |
| | PV | Reg Ed | $ 2,349,787.64 | $ 1,661,468.80 | $ 2,238,191.98 |
| | PV | Total | $ 2,834,026.43 | $ 2,342,241.32 | $ 2,751,267.82 |
| | FS | SPED | $ 259,683.65 | $ 231,664.89 | $ 238,175.83 |
| | FS | Reg Ed | $ 2,481,914.59 | $ 2,091,863.34 | $ 2,508,547.03 |
| | FS | Total | $ 2,741,598.24 | $ 2,323,528.23 | $ 2,746,722.86 |
| Personnel | MS | SPED | $ 843,619.58 | $ 1,014,919.60 | $ 811,822.87 |
| Departmentalized | MS | Reg Ed | $ 4,176,849.28 | $ 2,954,260.73 | $ 3,780,443.21 |
| | MS | Total | $ 5,020,468.86 | $ 3,969,180.33 | $ 4,592,266.08 |
| | HS | SPED | $ 1,063,338.98 | $ 981,396.41 | $ 1,032,901.00 |
| | HS | Reg Ed | $ 4,213,648.60 | $ 2,842,266.56 | $ 3,979,752.44 |
| | HS | Total | $ 5,276,987.58 | $ 3,824,266.56 | $ 5,012,653.44 |
| SPED Costs | | | $ 2,737,200.18 | $ 3,049,471.63 | $ 2,691,009.72 |
| RegEd Costs | | | $ 13,961,344.55 | $ 10,091,335.79 | $ 13,116,300.17 |
| Total Ed Costs | | | $ 16,698,544.73 | $ 13,141,411.01 | $ 15,617,241.53 |
| SPED Students | | | 428 | 396 | 428 |
| Reg Ed Students | | | 3,143 | 3,143 | 3,143 |
| Total Students | | | 3,571 | 3,539 | 3,571 |
| Cost/SPED Student | | | $ 6,395.33 | $ 7,700.69 | $ 6,287.41 |
| Cost/RegEd Studet | | | $ 4,442.04 | $ 3,210.73 | $ 4,173.18 |
| SPED/RegEd Cost Ratio | | | 1.4 | 2.3 | 1.4 |

## Final Cost Comparison Totals for Each Model and District Cost Analysis Summary

Worksheet Table 11 and Table 12 which follow present this study's final cost comparison totals and a summary of some of the Kings Park Central School District's related costs for special education services, respectively.

**Table 11**

| Special Education Cost Comparison Totals for Each Model | | | |
|---|---|---|---|
| | Full Inclusion Model | Conservationist Model | Conciliatory Model |
| Personnel | | | |
| SPED Instruction | $ 830,241.62 | $ 1,053,155.62 | $ 846,285.85 |
| Grades K-4 | | | |
| SPED Instruction | $ 1,906,958.56 | $ 1,996,316.01 | $ 1,844,723.87 |
| Grades 5-12 | | | |
| K-12 District Related Services | Undetermined | Undetermined | Undetermined |
| Contracted Related Services | $ 161,311.00 | $ 161,311.00 | $ 161,311.00 |
| K-12 Assessment | Undetermined | Undetermined | Undetermined |
| SPED Tuition BOCES* | 0.00 | $ 787,423.00 | 0.00 |
| Other Out of District Tuition | 0.00 | $ 122,272.35 | 0.00 |
| | | | |
| Transportation | | | |
| Transportation In-District SPED | $ 25,911.60 | $ 77,658.60 | $ 25,911.60 |
| Transportation Out of District SPED | 0.00 | $ 246,782.32 | 0.00 |
| | | | |
| Facilities | | | |
| District Facilities Available to SPED | $ 737,507.00 | $ 858,369.00 | $ 737,507.00 |
| | | | |
| | | | |
| Totals | $ 3,661,929.78 | $ 5,344,091.90 | $ 3,615,739.32 |
| Special Education Students | 428 | 428 | 428 |
| Total Cost per SPED Student | $ 8,555.91 | $ 12,486.20 | $ 8,447.99 |
| | | | |
| *Includes related services | | | |
| But could not be separated | | | |
| | | | |

BEST COPY AVAILABLE

## Table 12

| Summary of Indistrict Cost Analysis Results | |
|---|---|
| **Program or Related Servicre** | **Average Cost/Student** |
| Elementary Level Assessment (including CSE meeting) | $1,571/Student |
| High School Level Assessment (including CSE meeting) | $830/Student |
| Speech Program (2 30-minute periods per week) | $950/Student |
| Counseling (1 40-minute period/week) | $630/student |
| Average Resource Room | $6,115/Student |
| Average Self-Contained Classroom | $12,278/Student |
| Average Regular Education Program | $3,211/Student |
| Average Special Education Program | $7,701/Student |
| SPED to RegEd Instructional Cost Ratio | 2.3 |
| Regular Half-Day Kindergarten | $2,149/Student |
| Special Education Half-Day Kindergarten | $6,701Student |
| Regular Education Program (Grade 1-4) | $3,406/Student |
| Resource Room (Grade 1-4) | $6,622/Student |
| Self-Contained Classroom (Grade 1-4) | $14,784/Student |
| Regular Education Program (Grade 5-8) | $2,988/Student |
| Resource Room ( Grade 5-8) | $5,681/Student |
| Self-Contained Classroom (Grade 5-8) | $11,066/Student |
| Regular Education Program (Grade 9-12) | $3,456/Student |
| Resource Room (Grade 9-12) | $6,281/Student |
| Self-Contained (Grade 9-12) | $14,800/Student |
| Special Ed Classroom Value | $10,000* |
| Transportation Van with Aide | $12,956* |
| Bus with Aide | $13,986* |

* Not per student costs

## Outcomes Results

The outcomes for the study consisted of the total utility scores obtained from 14 of the 18 respondents who were requested to complete utility scales.* The highest total utility rating provided by the School District's representatives was for the Conservationist Model with an 86.06, followed by the Full Inclusion Model with a utility rating of 80.31, and the Conservationist Model with a utility rating of 67.21

Please see Appendix B which provides all 14 respondents' utility and probability scores for each model's four language arts goals and Appendix C which provides all 14 respondents' utility and probability scores for each model's four mathematics goals.

## Calculated Cost-Utility Analysis Ratios for Each Model

Table 13 below contains the average of all total utility scores for each model, divided by the cost per student calculated for each model, to obtain the utility ratio for each model. The lowest or most favorable utility ratio was for the Conciliatory Model with a cost of $95 per unit of utility. The next most favorable utility ratio was for the Full Inclusion Model with a cost of $107 per unit of utility. The least favorable utility ratio was for the Conservationist Model with a cost of $186 per unit of utility.

* Completed scales were received from the president of the board of education, a former vice-president of the board of education, the superintendent of schools, an elementary school principal, the director of guidance, the high school language arts chairperson, an elementary school reading teacher, a school psychologist, a speech pathologist, a special education teacher, two elementary school teachers, a parent who was president of the special education parent teachers' association (SEPTA), and a second parent who had four children attending district schools: two in regular education programs and two in special education programs. Completed scales were not received from the director of special education, the middle school principal, and a high school special education teacher. Scales returned by a high school language arts teacher included positive comments about the study but the scales were unscored.

BEST COPY AVAILABLE

Table 13

| Final Cost-Utility Scores and Ratios | | | |
|---|---|---|---|
| Average Language Arts Utility + Average Math Utility = Total Utility (for each respondent) | | | |
| | Full Inclusion | Conservationist | Conciliatory |
| Average of All Total Utility Scores | 80.31 | 67.21 | 89.06 |
| Cost Per SPED Student* | $8,556 | $12,486 | $8,448 |
| Cost-Utility Ratio | $107 | $186 | $95 |

*District's 1997-98 Total Special Education Population = 428 Students

## Discussion

### The Cost of Inclusive Instruction

In response to the question frequently asked of researchers, "Does an inclusion program cost more or less than what we are doing now?" (McLaughlin & Warren, 1994, p.i), this study provides several answers or findings.

Finding one is that the cost of any model is related to a school's number of special needs students and their identified needs. For example the cost of special education instruction for the 18 second graders in the Park View Elementary School served in two self-contained classrooms and two resource rooms amounts to $13,289 per student with the Conservationist Model, while the instructional cost for the same 18 students included into three classrooms of 20 students each with the Full Inclusion Model is $8,050 per student. However, the cost of the Conservationist Model for the 6 second graders in the Fort Salonga School Elementary School whose school day includes one hour of resource room is $5,906 per student, while the cost for their instruction in classes of 22 students with the Full Inclusion Model is $7,197 per student.

In addition, this study shows that the costs for providing highly specialized instruction and related services, as is necessary for students who are deaf or visually impaired are formidable regardless of where such services are provided. Highly specialized services and programs have the potential to impact the cost of any model dramatically.

Finding two is that the cost of any model also depends on the quantity and quality of services a school district chooses to provide or can afford to provide for both its regular education and special needs students. This study employs the Resource Cost Model to value the average grade 1-4 self-contained special education program taught by a single teacher with no additional support or services at approximately $67,430 per year. However, the addition of a full-time teacher assistant and a daily special consisting of art, music, physical education, library, or computers raises that cost to $94,617 per year.

The third finding is that when instructional personnel salaries are relatively constant, the differences in costs are largely explained by staffing patterns and class sizes. For example, the district's regular elementary grade 1-4 program that provides full day instruction by a single teacher and is supplemented with a period per day of art, music, physical education, library, or computers, would increase from $73,576 to $141,006 when implemented by the two members of a conciliatory program inclusion team and to $158,322 when implemented by the three members of the adaptive instruction team. Also of significance is that the cost for one of 12 students in the self-contained classroom that costs $94,617 per year is $7,884, while the costs for one of 24 students in the classroom taught by an adaptive instruction team or conciliatory program inclusion team would be $6,596 and $5,875 respectively.

Based on this study, special education instructional personnel costs would be less for the Full Inclusion Model and the Conciliatory Model in the district's K-4 settings and the 5-8 middle

school, especially when self-contained classrooms are present. However, the Full Inclusion Model would be the most expensive to implement at the district's high school, where block scheduling is employed and teachers are provided 80-minutes per day for preparation and collaboration and students are provided 80-minute seminars every other day to schedule extra help, counseling, or other programs and activities of choice.

This study does not support the assumption of some school administrators and researchers (National Center on Educational Restructuring and Inclusion, 1995) that once the necessary start-up costs for a new model of instruction were satisfied, the daily costs of implementing and maintaining inclusive programs of instruction would probably be comparable to their former traditional special education programs. For in all of the district's schools, this study's Full Inclusion Model and Conciliatory Model would be servicing considerable numbers of regular education students at a higher cost per student than the regular education programs. Consequently, both inclusion models would increase the total costs for instructional personnel at both the building and district levels. (Please see Table 10).

However, the two inclusive models presented in this study are purposely presented as "generative" rather than "additive" approaches (Pugach, 1995) to accommodating special needs students in integrated settings. They are meant to reflect a commitment to collaboration and teamwork and an ongoing effort to transform the kind of teaching and learning that takes place in our classrooms. They assume the willingness of schools and communities to do whatever it takes to ensure that all students are prepared to function as full and active participants in American society. In addition, this study's two inclusive models would provide for a more equitable distribution of the school district's instructional dollars. Please see Table 10. This study's two inclusive models both have cost ratios (which contrast the relationship between their special

education expenditures and their regular education expenditures ) of 1.4, while the study's traditional or Conservationist Model has a cost ratio of 2.3.

Furthermore, inclusive models with an "ad hoc" or "whatever it takes" approach to successfully meeting the needs of a particular group of students, including those with special needs, may not always require the participation of all team members for every lesson or even every unit of instruction, and allow for considerable staffing variations and possible savings. Never the less, if inclusion classrooms are to be more than "add-ons" to traditional special education practices, then additional expenditures for both regular education and special education instructional personnel will be necessary for many school districts.

**Facility Costs**

This study finds the cost of maintaining separate special education facilities to be of marginal significance and a cost that impacts all three models with only slight variation. While there are unquestionably school districts that maintain extensive and separate special education facilities at considerable costs to their taxpayers, Kings Park is not one of them. In the Kings Park School District, the distinction between facilities for regular education students and facilities for special education students is an arbitrary one at best. While building floor plans accurately identify each building's special education classrooms and the Resource Cost Model was used to assess their value, in reality, that distinction is a questionable one. The identification of specific special education classrooms appears to be more of a convenience for teachers in the Special Education Department and a practical decision to utilize smaller classrooms to accommodate smaller groups of students. The school district's regular education and special education students appear to enjoy equal access to all district facilities.

**Transportation Costs**.

The potential for the transportation needs of special education students to dramatically impact school district special education costs (Vermont Department of Education, 1993) is supported by this study. This study finds that the potential cost of funding the additional personnel resources required by the Full Inclusion or Conciliatory Model would be tempered by the elimination of out-of district transportation expenditures. While the implementation of inclusive models would not eliminate all transportation costs for special education students, the degree to which school districts discontinue the out-of-district transportation of students, which may cost as much as $12,000 per year or more for a single student, considerable savings are possible.

## Conclusion

### Cost Analysis and Educational Outcomes

While cost analysis has been a neglected component of educational planning and evaluation, it is not recommended to policy makers as a substitute for the programmatic assessment of educational outcomes or the sole criterion on which to base all major programmatic decisions. Cost analysis is most valuable to education decision-makers when viewed as a ratio that relates costs to meaningful and desirable student outcomes. A concern for both costs and educational outcomes can increase chances that necessary attention is focused on local goals and priorities. A better understanding of how our education dollars are being spent can also improve the chances that school districts will employ the most cost-effective options to achieve desired educational goals and objectives.

This study's cost analysis and educational outcomes, referred to as a utility-analysis, reflect an effort to involve representatives of a local school district's educational community in

an assessment of models which for the most part do not currently exist in their district and a projection of language arts and mathematics outcomes which cannot yet be obtained. While the process may be extremely subjective, utility analysis has been presented (Levin, 1983) as a vehicle to involve some of the informed and knowledgeable stakeholders who would be affected by the implementation of new models of service delivery for special needs students in an evaluation of their merits. The process appears to have raised some questions, prompted some dialogue about how best to serve both special and regular education students, and identified a less than positive mandate for the perpetuation of conservationist special education practice. The results provide school district decision makers with meaningful information about prospective models of special education service delivery not previously available to them, not a single answer.

**Policy Implications**

The provisions of the reauthorized Individuals with Disabilities Education Act (1997) voice a preference for more inclusive approaches to the delivery of services for special needs students. Accordingly, the federal funding formula is moving from the current focus on a district's special education child count to a census based formula which will provide federal funds based on the size of a school district's total student population with 15 percent of the allocation depending on the district's poverty index. While the promised fiscal policy change may discourage some questionable and costly separate special education placements and encourage more inclusion of special needs students in integrated settings, it may also impose an unfair burden of fiscal responsibility on poorer school districts with a higher than average special education population and a high percentage of seriously disabled students.

An underlying assumption of the new policy initiative appears to be that most if not all school districts share a relatively uniform percentage of special needs students, approximated at the national average of 12 percent. However, while the policy change may prove a positive and valuable one for school districts of average need and circumstances, the policy may prove to be less than positive and even detrimental to districts of greater than average need and less than average wealth.

Actually, in recent years the federal government's share of special education's high costs has only averaged about 8 percent with states often funding over 50 percent and local school districts responsible for as much as 40 percent and sometimes more. The problem of adequate special education funding for some school districts of greater than average need is further exacerbated by state funding system through which local school district resources are principally derived from revenues assessed on local property owners. The projected costs of this study's inclusive models raise the question of whether poorer communities can adequately fund richly staffed and well supported inclusive models of instruction which possess the potential to effectively meet the needs of all students including those with special needs.

**Recommendations for Future Research**

The U.S. Department of Education's most recent estimate of a special education program's average cost is $6,430 per student (1997). The estimate is derived in part from a special education marginal cost ratio taken from the Kakalik et al study in 1981 and applied to the current average per pupil expenditure for all students of $5,640 (U.S. Department of Education, 1997). However, while the estimate is considered a probable overstatement because of its reliance on total education expenditures which already include special education expenditures (U.S. Department of Education, 1997), it underestimates the average cost of special

education services per student in the local school district studied which was represented as an average Long Island, New York school district. In fact, the instructional personnel costs for the school district's Conservationist Model, alone, exceed the government's estimate with a cost per student of $7,701. Adding the calculated expenditures for transportation and facility resources provided for special education students would increase costs for all three models beyond the government's estimate as follows: the Conservationist Model at $12,486 per student, the Full Inclusion Model at $8,556 per student, and the Conciliatory Model at $8,448 per student. Is the district studied an average Long Island, New York school district as hypothesized? Are Long Islanders spending more dollars on special education than other New Yorkers and other Americans, or is it possible that the federal government is underestimating the cost of special education services at the local level?

A review of local school district special education services will discover varying interpretations of the "free appropriate public education" in the "least restrictive environment" mandated by the IDEA. In general, studies are needed to assess what school districts are currently spending on special education services, what kinds of services they are providing, and what educational outcomes they are producing.

Additional detailed cost analysis studies of inclusion and other models of service delivery for special needs students in suburban Long Island, New York schools are necessary to test my hypothesis that the school district studied is an average representative of the area in terms of its wealth, the relative size and the needs of its special education population, and its costs for personnel, transportation, and facility resources. However, the region also has its share of very affluent and low wealth school districts and detailed cost analyses are also needed to explore the

nature of the relationship between a community's socio-economic status and the size and level of need of its special education population.

References

Algozzine, B. (1993). Splitting hairs and loose ends: Answering special education's wake-up call [Letters]. The Journal of Special Education, 26 (4) 462-468.

Audette, B., & Algozzine, B. (1997). Re-inventing government? Let's reinvent special education. Journal of Learning Disabilities, 30 (4) 378-383.

Allis, S. (1996, November). The struggle to pay for special ed. Time, pp. 82-84.

Chambers, J. G. (1997). The patterns of expenditures on students with disabilities: A methodological and empirical analysis. Unpublished manuscript.

Chambers, J. G. (1998). The patterns of services provided to students with disabilities. Palo Alto, CA: Center for Special Education Finance, American Institutes for Research.

Chambers, J., Parrish, T., & Lieberman J. (1997). What are we spending on special education in the U.S.? Palo Alto, CA: Center for Special Education Finance, American Institutes for Research.

Chambers, J. G., & Wolman, J. M. (1998). What can we learn from state data systems about the cost of special education? A case study of Ohio. Palo Alto, CA: Center for Special Education Finance, American Institutes for Research.

Deno, S. L., Foegen, A, Robinson, S., & Espin, C. (1996). Commentary: Facing the realities of inclusion for students with mild disabilities. The Journal of Special Education, 36 (3) 345-357.

Dillon, S. (1994, June 27). Comptroller report faults special education policy. The New York Times. p. 3.

Fuchs, D., & Fuchs, L. S. (1991). Framing the REI debate: Abolitionists versus conservationists. In J. W. Lloyd, N. N. Singh, & A. C. Repp (Eds.), The regular education

initiative: Alternative perspectives on concepts, issues, and models. (pp. 241-255). DeKalb, IL: Sycamore.

Fuchs, D., Fuchs, L. S., & Fernstrom, P. (1993). A conservative approach to special education reform: Mainstreaming through transenvironmental programming and curricular-based measurement. American Education Research Journal, 30 (1) 149-177.

Giangreco, N. F., & Putnam, J. W. (1991). Supporting the education of students with severe disabilities in regular education environments. In L. H. Meyer, C. A. Peck, & L. Brown (Eds.), Critical issues in the lives of people with severe disabilities. (pp. 245-270). Baltimore: Brookes.

Individuals with Disabilities Act Amendments of 1997, 20 U. S. C. § 1400 *et seq.*

Kauffman, J. M., & Hallahan, D. P. (1995). (Eds.). The illusion of full inclusion: A comprehensive critique of a current special education bandwagon. Austin, TX: Pro-Ed.

Levin, H. M. (1983). Cost-Effectiveness: A primer. Newbury Park, CA: Sage.

Lipsky, D. K., & Gartner, A. (1991). Restructuring for quality. In J. W. Lloyd, N. N., Singh, & A. C. Repp (Eds.), The regular education initiative: Alternative perspectives on concepts, issues, and models. Sycamore, Il: Sycamore.

Lipsky, D. K., & Gartner, A. (1996). Inclusion, school restructuring, and the remaking of American society. Harvard Educational Review, 66 (4) 762-79.

McLaughlin, M. J., & Warren, S. H. (1994). Resource implications of inclusion: Impressions of special education administrators at selected sites. (Policy Paper No. 1). Palo Alto, CA: Center for Special Education Finance, American Institutes for Research.

Moore, M. T., Strang, E. W., Schwartz, M., & Braddock, M. (1988). Patterns in special education service delivery and cost. Washington, DC: Decision Resources Corporation. (Eric Document Reproduction Service No. ED 303 027).

National Center on Educational Restructuring and Inclusion. (1995). National study of inclusive education. New York: City University of New York, Graduate School and University Center.

New York State Education Department. (1997). Performance report of educational and vocational services and results for individuals with disabilities, 1995-1996. Office of Vocational and Educational Services for Individuals with Disabilities. Albany, NY: Author.

O'Reilly, F. E. (1995). State and special education funding formulas and the use of separate placements for students with disabilities: Exploring linkages (Policy Paper No. 7). Palo Alto, CA: Center for Special Education Finance, American Institutes for Research.

Parrish, T. B. (1998). Restructuring special education funding in New York to promote the objective of high learning standards for all students. Palo Alto, CA: Center for Special Education Finance, American Institutes for Research.

Parrish, T. B. (1996). Special education finance: Past, present, and future (Policy Paper No. 8). Palo Alto, CA: Center for Special Education Finance, American Institutes for Research.

Parrish, T. B., O'Reilly, F., Duenas, I. E., & Wolman, J. (1997). State special education finance systems, 1994-95. Palo Alto, CA: Center for Special Education Finance, American Institutes for Research.

Pruslow, J. T. (1999). A comparison of the costs and educational outcomes of three models of service delivery for special needs students: The full inclusion model, the

conservationist model, and the conciliatory model. Unpublished doctoral dissertation, Hofstra University, New York.

Pugach, M. C. (1995). On the failure of imagination in inclusive schooling. The Journal of Special Education, 29 (2) 212-223.

Roach, V. (1995). Supporting inclusion: Beyond the rhetoric. Phi Delta Kappan, 75 (4) 295-299.

Rothstein, R., & Miles, K. H. (1995). Where's the money gone? Changes in the level and composition of education spending. Washington, D.C.: Economic Policy Institute.

Schumm, J. S., & Vaughn, S. (1995). Getting ready for inclusion: Is the stage set? Learning Disabilities Research and Practice, 10 (3) 169-179.

Snell, M. E. (1991). Schools are for all kids: The importance of integration for students with severe disabilities and their peers. In J. W. Lloyd, N. N. Singh, & A. C. Repp (Eds.), The regular education initiative: Alternative perspectives on concepts, issues and models (pp.133-148). DeKalb, Il: Sycamore.

Stainback, W., Stainback, S., & Forest, M. (Eds.). (1989). Educating all students in the mainstream of regular education. Baltimore: Brookes.

United States Department of Education. (1997). Nineteenth annual report to Congress on the implementation of the Individuals with Disabilities Education Act. Washington, DC: Author.

Vermont Department of Education. (1993). Vermont's Act 230: Three years later, A report on the impact of Act 230. Montpelier, VT: Author.

Villa, R. A., & Thousand, J. S. (Eds.). (1995). Creating an inclusive school. Alexandria, VA: Association for Supervision and Curriculum Development.

Yell, M. L. (1995). Least restrictive environment, inclusion, and students with disabilities: A legal analysis. The Journal of Special Education, 28 (4) 389-404.

Ysseldyke, J., Thurlow, M., & Shriner, J. (1994). Students with disabilities & educational standards: Recommendations for policy & practice (NCEO Policy Directions No. 2). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes.

## Appendix A

**Costs for Related Services in KPCSD**

| Service | Ave K-4 Sal w Benef | Sal/180 days | Day in Min | Session/Min | %Day | Cost/Sess | 40 Sess/Yr | 80/Sess/Yr | 120 Sess/Yr |
|---|---|---|---|---|---|---|---|---|---|
| **Reading** | | | | | | | | | |
| **Speech** | $71,181.56 | $395.45 | 400 | 30 | 8% | $29.66 | $1,186.36 | $2,372.72 | $3,559.08 |
| **Psychology** | Ave 16 Yrs Exp + MA | $395.45 | 400 | 40 | 10% | $39.55 | $1,581.81 | $3,163.62 | $4,745.44 |
| | | $395.45 | 400 | 60 | 15% | $59.32 | $2,372.72 | $4,745.44 | $7,118.16 |
| | | $395.45 | 400 | 80 | 20% | $79.09 | $3,163.62 | $6,327.25 | $9,490.87 |
| | | $395.45 | 400 | 120 | 30% | $118.64 | $4,745.44 | $9,490.87 | $14,236.31 |
| **Assessment Times** | | | | | | | | | |
| (may include building and CSE meetings) | | | | | | | | | |
| | 6 hours | $395.45 | 400 | 360 | 90% | $355.91 | | | |
| | 8 Hours | $395.45 | 400 | 480 | 120% | $474.54 | | | |
| | 10 hours | $395.45 | 400 | 600 | 150% | $593.18 | | | |
| | 12 hours | $395.45 | 400 | 720 | 180% | $711.82 | | | |
| | 13 hours | $395.45 | 400 | 780 | 195% | $771.13 | | | |
| | 14 hours | $395.45 | 400 | 840 | 210% | $830.45 | | | |
| | 15 hours | $395.45 | 400 | 900 | 225% | $889.77 | | | |
| | 16 hours | $395.45 | 400 | 960 | 240% | $949.09 | | | |
| **Average K-4 Assessment for CSE** | | | | | | | **25/year** | **50 /year** | **70/Yr** |
| Includes building and CSE meetings) | | | | | | | | | |
| **Read** | 8 hours | $436.31 | 400 | 480 | 120% | $523.57 | $13,089.22 | $26,178.44 | $36,649.82 |
| **Psych/Socio** | 8 hours | $436.31 | 400 | 480 | 120% | $523.57 | $13,089.22 | $26,178.44 | $36,649.82 |
| **Speech** | 8 hours | $436.31 | 400 | 480 | 120% | $523.57 | $13,089.22 | | |
| | | | | | **Total** | **$1,570.71** | **$39,267.66** | **$52,356.88** | **$73,299.63** |

| Service | Ave 5-12 Sal w Benef | Sal/180 days | Day in Min | Session/Min | %Day | Cost/Sess | 40 Sess/Yr | 80/Sess/Yr | 120 Sess/Yr |
|---|---|---|---|---|---|---|---|---|---|
| **SPED Tch** | | $436.31 | 400 | 30 | 8% | $32.72 | $1,308.92 | $2,617.84 | $3,926.77 |
| **Speech** | | $436.31 | 400 | 40 | 10% | $43.63 | $1,745.23 | $3,490.46 | $5,235.69 |
| **Psychology** | **$78,535.32** | $436.31 | 400 | 60 | 15% | $65.45 | $2,617.84 | $5,235.69 | $7,853.53 |
| **Guidance** | Ave 17 Yrs Exp + MA | $436.31 | 400 | 80 | 20% | $87.26 | $3,490.46 | $6,980.92 | $10,471.38 |
| | | $436.31 | 400 | 120 | 30% | $130.89 | $5,235.69 | $10,471.38 | $15,707.06 |
| **Assessment Times** | | | | | | | | | |
| (may include building and CSE meetings) | | | | | | | | | |
| | 6 hours | $436.31 | 400 | 360 | 90% | $392.68 | | | |
| | 8 Hours | $436.31 | 400 | 480 | 120% | $523.57 | | | |
| | 10 hours | $436.31 | 400 | 600 | 150% | $654.46 | | | |
| | 12 hours | $436.31 | 400 | 720 | 180% | $785.35 | | | |
| | 13 hours | $436.31 | 400 | 780 | 195% | $850.80 | | | |
| | 14 hours | $436.31 | 400 | 840 | 210% | $916.25 | | | |
| | 15 hours | $436.31 | 400 | 900 | 225% | $981.69 | | | |
| | 16 hours | $436.31 | 400 | 960 | 240% | $1,047.14 | | | |
| **Average 5-12 Assessment for CSE** | | | | | | | | | |
| Includes building and CSE meetings) | | | | | | | | | |
| **SPED Tch** | | $436.31 | 400 | 280 | 70% | **$305.41** | | | |
| **Psych/Socio** | | $436.31 | 400 | 480 | 120% | **$523.57** | | | |
| **Total** | | | | | | **$829.87** | | | |

**Appendix B Results of Respondents' Language Arts Utility and Probability Ratings**

| English Language Arts Utility Ratings and Probability Ratings from 14 Respondents | | | | | |
|---|---|---|---|---|---|
| **Ranges of Scores** | **0** | **1 - 2 - 3** | **4 - 5 - 6** | **7 - 8 - 9** | **10** |
| **Utility Ratings** | | | | | |
| **Full Inclusion** | | | | | |
| I and U | | | 5,5,6,5,5,5 | 7,7,7,7,9,7,7 | 10, |
| LR and E | | | 5,5,6,5,5,4,5 | 8,8,7,7,7 | 10 |
| CA and E | | 3, | 5,6,4,6,4,5,5 | 7,7,7,7,7 | 10 |
| SI | | | 6,6,6,5 | 8,8,8,9 | 10,10,10,10,10,10 |
| **Conservationist** | | | | | |
| I and U | | 3,3 | 5,4 5,6,6,5,5 | 7,8,8,7,8 | |
| LR and E | | 3,3 | 5,4,5,4,6,5,6,5,6,5 | 7,7 | |
| CA and E | | 3,1 | 5,4,4,4,5,5,5,6,5,5 | 7,7 | |
| SI | 0, | 2,2,2,3 | 5,5,5,5,5,5 | 8,7,8 | |
| **Conciliatory** | | | | | |
| I and U | | | 4,6,5,5,5 | 7,8,8,7,8 | 10 |
| LR and E | | 2, | 5,5,5,5,5 | 7,8,7,7,7,7,8,7 | |
| CA and E | | 2, | 5,4,6,5,6,5,5 | 7,8,8,7,8,8 | |
| SI | | 3, | 4,5,6,6,5 | 7,8,8,8,9,8 | 10,10 |
| **Probability Ratings** | | | | | |
| **Full Inclusion** | | | | | |
| I and U | | 3, | 5,5,4,6,5,4,5,5 | 9,7,9,8 | |
| LR and E | | 3,3 | 5,5,4,5,5,5 | 9,7,8,9,7 | |
| CA and E | | 3,3 | 5,5,4,6,4,5,5,5 | 9,7,8 | |
| SI | | 3, | 5,4,5,5 | 8,7,8,8,8,7 | 10,10 |
| **Conservationist** | | | | | |
| I and U | | | 6,5,5,5,5,5,5,5,5 | 7,7,7,9,9,8 | |
| LR and E | | 3, | 5,5,5,5,4,5,5 | 7,7,9,8,7,7 | |
| CA and E | | 3, | 5,6,5,6,5,4,5,5,5 | 7,9,8,7 | |
| SI | | 2, | 5,5,5,4,4,5,6,5,6,5 | 9,9,9 | |
| **Conciliatory** | | | | | |
| I and U | | | 6,6,5,6,6,5,5 | 7,8,7,8,8,9 | 10, |
| LR and E | | | 5,5,6,5,6,5,5 | 7,7,7,7,8,7 | 10 |
| CA and E | | | 5,5,6,5,5,5,5,5,5 | 7,7,7,7,8,7, | 10 |
| SI | | | 5,5,6,5,5,5 | 7,7,8,8,8 | 10,10 |

**Note:** The upper-half of the chart displays the actual utility ratings (or preferences) of the study's 14 respondents for the goals of each model based on their view of the model's ability to assist district special education students to perform on grade level as measured by New York State's grade appropriate assessments. The lower-half of the chart displays the actual probability ratings (or confidence levels) of the study's 14 respondents for the goals of each model based on the probability that they can work together with their colleagues and the community which they serve to implement the goals of each model successfully. Respondent ratings for each goal were signified by scores of "0" through "10" with "0" indicating no chance for success and "10" indicating grade level achievement. Thus for every model, each goal is followed by the 14 ratings of the study's respondents. Respondents were encourage to view their scoring options as components of an equal interval scale.

## Appendix C Results of Respondents' Mathematics Utility and Probability Ratings

| Mathematics Utility Ratings and Probability Ratings from 14 Respondents | | | | | |
|---|---|---|---|---|---|
| **Ranges of Scores** | **0** | **1 - 2 - 3** | **4 - 5 – 6** | **7 – 8 - 9** | **10** |
| **Utility Ratings** | | | | | |
| **Full Inclusion** | | | | | |
| T L and C | | | 5,5,6,5,5,5,5 | 7,8,7,7,9 | 10,10 |
| A R Skills | | | 5,5,6,5,6,5,5,5 | 8,8,7,7,8 | 10, |
| P B M Cal | | | 5,5,6,5,6,5 | 8,7,8,7,8,7 | 10,10 |
| A O U I | | | 5,5,5,5,6,5,4 | 7,7,8,7,8,8 | 10, |
| **Conservationist** | | | | | |
| T L and C | | 3, | 5,6,5,5,5,5,5,5,5,6,5 | 7,7 | |
| A R Skills | | 3, | 5,5,4,5,4,5,5,5,6,6,6 | 7,7 | |
| P B M Cal | | 3, | 5,4,4,6,5,5 | 8,8,7,8,7,8 | 10, |
| A O U I | | 3,3 | 5,4,5,6,5,5,6,6 | 9,8,7 | 10, |
| **Conciliatory** | | | | | |
| T L and C | | | 5,4,6,5,6,5,5,5 | 7,9,8,7,8 | 10, |
| A R Skills | | 3, | 5,5,5,4,5,5,4 | 8,9,8,7,7 | 10, |
| P B M Cal | | 3, | 5,5,5,6 | 8,8,8,8,7,8,8,7 | 10, |
| A O U I | | 3, | 5,6,4,5,6,5,5,4, | 9,8,8,7 | 10, |
| **Probability Ratings** | | | | | |
| **Full Inclusion** | | | | | |
| T L and C | | 3, | 5,5,4,5,5,6,4 | 7,9,7,7,7 | 10, |
| A R Skills | | 3, | 5,6,5,4,5,5,6,4 | 9,7,7,9,7 | |
| P B M Cal | | 3, | 5,5,4,5,5,5,5 | 7,7,7,7 | 10,10 |
| A O U I | | 3,3 | 5,5,5,4,5,5,6 | 8,7,7,9,8 | |
| **Conservationist** | | | | | |
| T L and C | | | 5,5,6,5,6,5,5,5,5,6 | 7,8,9,8 | |
| A R Skills | | | 5,4,5,6,6,5,5,5,6 | 7,8,8,9,7 | |
| P B M Cal | | | 5,5,5,6,5,4,5,5 | 8,8,9,8 | 10,10 |
| A O U I | | | 5,4,5,6,6,5,4,5,6 | 8,8,8,9,7 | |
| **Conciliatory** | | | | | |
| T L and C | | | 5,6,6,6,5,5,5 | 8,7,8,8,8,8,8 | |
| A R Skills | | | 5,4,6,5,5,5,5 | 7,8,7,8,8,7,8 | |
| P B M Cal | | | 5,5,6,5,5 | 8,7,8,8,7,8,8,7 | 10, |
| A O U I | | | 5,4,6,5,5,5 | 8,8,7,8,8,7,8,8 | |

**Note:** The upper-half of the chart displays the actual utility ratings (or preferences) of the study's 14 respondents for the goals of each model based on their view of the model's ability to assist district special education students to perform on grade level as measured by New York State's grade appropriate assessments. The lower-half of the chart displays the actual probability ratings (or confidence levels) of the study's 14 respondents for the goals of each model based on the probability that they can work together with their colleagues and the community which they serve to implement the goals of each model successfully. Respondent ratings for each goal were signified by scores of "0" through "10" with "0" indicating no chance for success and "10" indicating grade level achievement. Thus for every model, each goal is followed by the 14 ratings of the study's respondents. Respondents were encourage to view their scoring options as components of an equal interval scale.